

MONEY AND BANKING

MONEY AND BANKING

BY

FREDERICK A. BRADFORD, PH.D.

PROFESSOR OF ECONOMICS

AND HEAD OF THE DEPARTMENT OF FINANCE

LEHIGH UNIVERSITY



LONGMANS, GREEN AND CO.

LONGMANS, GREEN AND CO., LTD.
OF PATERNOSTER ROW
17 CHITTARANJAN AVENUE, CALCUTTA 13
NICOL ROAD, BOMBAY 1
36A MOUNT ROAD, MADRAS 2

BRADFORD
MONEY AND BANKING
NEW AND REVISED EDITION

First Printing, August 1941

PREFACE

The purpose of this revision of my *Money and Banking* is, in the main, the usual one of attempting to keep up-to-date a book devoted to a subject some phases of which, at least, are more or less constantly changing. In addition to including current material, however, I have changed to some extent the organization of the text to give it what I hope will be a more teachable form. Thus the first part of the new edition contains chapters on the nature and historical development of money, followed by a similar treatment of banking in this country. It is difficult at times to teach some parts of monetary and banking history before the principles governing the banking process and the value of money have been covered. My own experience has indicated, on the other hand, that even more problems arise if the facts of history and existing laws are not familiar when the principles are dealt with. Consequently, I have treated money and banking alike in dealing with their nature and development in the first section of the text. Some phases of legislation which were of current interest when the last revision was prepared have been condensed or deleted in order not to place too much stress on factors which are more of historical than of current interest.

Aside from bringing the content up-to-date, the remainder of the text remains in similar form to that of the previous edition. A new chapter—Commercial Banking Problems in the United States—has been added in a later section. This chapter contains some material formerly included in another chapter and some which is entirely new. The chapter on Central Banking has been shortened by excluding the descriptive material on the central banks of England, France, Germany and Canada. Frequent changes in the rules and regulations governing these institutions, plus inability to

obtain up-to-the-minute, accurate information concerning most of them has been responsible for this deletion.

As in previous editions, I wish to acknowledge my indebtedness to Dr. Neil Carothers of Lehigh University for permission to quote from *Fractional Money* in Chapter III, as well as for much personal assistance in the original preparation of that chapter. Appreciation is also accorded to the Bureau of International Research of Harvard University and Radcliffe College for permission to quote from E. L. Dulles, *The Bank for International Settlements at Work*, in Chapter XXXI, and to Colonel Leonard P. Ayres and the Cleveland Trust Company for permitting the reproduction of charts and a part of the text of *The Cause of This and Other Depressions* in Chapter XXXIII. *The American Bankers Association Journal* (now *Banking*), the Research Council of the American Bankers Association, the Federal Reserve Banks of New York and Philadelphia, the Guaranty Trust Company, and the Bethlehem National Bank of Bethlehem, Pennsylvania, have also kindly permitted the reproduction of certain forms and figures appearing at different points throughout the text. The Division of Research and Statistics of the Board of Governors of the Federal Reserve System has also been most helpful. All charts in the text not labelled as to source are taken from the Chart Book published by this Division.

I wish to thank my colleague, Professor F. C. Bratt for many helpful suggestions in connection with the revision of Chapters XXV and XXXIII. Particular appreciation is accorded to Professor R. W. Mayer, without whose painstaking assistance this revision could not have been completed at this time.

The publishers have furnished me with a complete list of criticisms, errors, etc., which they had obtained from various instructors and from other sources. Many of these have proved most helpful in revising the text, and I wish to express my thanks for the assistance thus rendered.

FREDERICK A. BRADFORD

CONTENTS

PART I. NATURE AND DEVELOPMENT

CHAPTER	PAGE
I. THE NATURE AND FUNCTIONS OF MONEY	3
II. MONETARY STANDARDS AND SYSTEMS	22
III. MONETARY DEVELOPMENT IN THE UNITED STATES	50
IV. MONETARY DEVELOPMENTS SINCE 1932	69
V. THE NATURE AND FUNCTIONS OF COM- MERCIAL BANKING	101
VI. EARLY AMERICAN BANKING	127
VII. THE NATIONAL BANKING SYSTEM .	147
VIII. DEFECTS OF THE NATIONAL BANKING SYSTEM	164
IX. THE FEDERAL RESERVE SYSTEM . . .	189
X. THE BANKING CRISIS AND REFORM LEG- ISLATION	213

PART II. THE COMMERCIAL BANKING PROCESS

XI. BANK NOTES	241
XII. COMMERCIAL BANK DEPOSITS—THE CHECK CURRENCY	259
XIII. PRIMARY AND SECONDARY RESERVES	272
XIV. LOANS, DISCOUNTS AND INVESTMENTS .	285
XV. FOREIGN EXCHANGE FUNCTIONS . . .	310
XVI. RATES OF EXCHANGE	328
XVII. THE INTER-RELATION OF DEPOSITS, RE- SERVES AND LOANS	345

CHAPTER	PAGE
XVIII. CENTRAL BANKING	360
XIX. BANK STATEMENTS AND EXAMINATIONS	375
XX. BANK EARNINGS AND EXPENSES	412
 <i>PART III. FEDERAL RESERVE POLICY AND PRACTICE</i>	
XXI. THE MONEY MARKET IN THE UNITED STATES	431
XXII. CHECK COLLECTION AND RESERVES	453
XXIII. DISCOUNTS AND OPEN MARKET OPERATIONS	473
XXIV. NOTE ISSUES OF THE FEDERAL RESERVE BANKS	494
 <i>PART IV. THE VALUE OF MONEY</i>	
XXV. THE MEANING AND MEASUREMENT OF THE VALUE OF MONEY	515
XXVI. THE DETERMINATION OF THE VALUE OF MONEY	527
XXVII. BANK CREDIT MONEY AND THE VALUE OF THE STANDARD	544
XXVIII. GOVERNMENT CREDIT MONEY AND THE VALUE OF THE STANDARD	555
XXIX. INTERNATIONAL EXCHANGE AND THE VALUE OF MONEY	571
 <i>PART V. MONETARY AND BANKING PROBLEMS</i>	
XXX. THE PROBLEM OF CENTRAL BANK RESERVES	597
XXXI. CENTRAL BANK CO-OPERATION	609
XXXII. COMMERCIAL BANKING PROBLEMS IN THE UNITED STATES	628
XXXIII. MONETARY POLICY AND THE BUSINESS CYCLE	666

MONEY AND BANKING

ix

CHAPTER	PAGE
XXXIV. THE CONTROL OF CREDIT UNDER THE FEDERAL RESERVE SYSTEM	692
XXXV. FUTURE POSSIBILITIES OF CREDIT CON- TROL	718
XXXVI. THE PROBLEM OF THE STANDARD .	734

PART VI. NON-COMMERCIAL BANKING

XXXVII. TRUST FUNCTIONS . . .	755
XXXVIII. INVESTMENT BANKING FUNCTIONS . .	770
XXXIX. SAVINGS BANKING	791
XL. AGRICULTURAL CREDIT	805
INDEX	837

CHARTS

	PAGE
I. National Bank Notes Outstanding and Canadian Bank Note Circulation, 1900-1908	167
II. Currency Outside Banks and Demand Deposits Adjusted, 1920-1940	261
III. Foreign Exchange Rates	343
IV. Reserve Bank Credit and Related Items, 1917-1929	397
V. Reserve Bank Credit and Related Items, 1930-1941	397
VI. Member Bank Reserves and Related Items, 1940-1941	403
VII. Member Bank Reserves and Related Items, 1917-1932	403
VIII. Member Bank Reserves and Related Items, 1930-1941	405
IX. Required and Excess Reserves of Member Banks, 1930-1941	405
X. Member Bank Profits	413
XI. Income from Loans	414
XII. Income from Securities	415
XIII. Member Bank Profits as a Percentage of Earning Assets, by Federal Reserve Districts, 1938	426
XIV. Distribution of Dollar Acceptances and Total Outstanding	436
XV. Federal Reserve Notes in Circulation and Money in Circulation in the United States, 1928-1931	505

MONEY AND BANKING

xi

PAGE

XVI. Snyder's Index of the General Price Level and the Wholesale Commodity Price Level (B.L.S.), 1887-1939	523
XVII. Post-War Depressions	678
XVIII. Industrial Production, 1925-1934	682

FIGURES

	PAGE
1. Personal Check	103
2. Certified Check	103
3. Cashier's Check	104
4. Bank Draft	104
5. Promissory Note	105
6. Trade Acceptance	106
7. Bank Acceptance	107
8. Types of Indorsement	108
9. Route of a Check	177 and 178
10. Federal Reserve Districts	201
11. Commercial Deposits Pool	286
12. Corporation Financial Statement	295 to 298
13. Collateral Loan Agreement	307
14. Letter of Credit (Agreement)	319 and 320
15. Financing an Import Transaction by Bankers' Ac- ceptances	321
16. Financing an Export Transaction by Bankers' Ac- ceptances	323
17. Computation of Reserve to be Carried with the Federal Reserve Bank by Member Bank	385
18. One-Minute Chart for Analyzing Bank Accounts	420
19. Intra-District Collections	461
20. Savings Deposits Pool	792
21. Washington Organization of Farm Credit Admin- istration	825
22. District Organization of Farm Credit Administra- tion	826

TABLES

	PAGE
I. Changes in the Official Price of Gold under the Gold Purchase Plan October 25, 1933 to February 1, 1934	82
II. Percentage of Deposits Required to be held as Reserves by National Banks, 1887-1913	153
III. Items from Statements of National Banks, 1866-1913	155
IV. Number of Banks, by Classes	157
V. Member Bank Reserves under the Original Federal Reserve Act	206
VI. Member Bank Reserves under the Federal Reserve Act as Amended	206
VII. Loans and Investments and Deposits of Member Banks and All Banks in the United States	210
VIII. Volume of Operations in Principal Departments	211
IX. Report of the Reconstruction Finance Corporation	216
X. Items from the Statements of Member Banks, December 31, 1928 and December 31, 1932	391
XI. Member Bank Reserve Balances, Reserve Bank Credit and Related Items, 1918- 1939	399
XII. Banking Income per \$100 of Deposits, All Insured Commercial Banks, 1939	415
XIII. Banking Expenses per \$100 of Deposits, All Insured Commercial Banks, 1939	416

	PAGE
XIV. Net Profits of Member Banks per \$100 of Earning Assets, 1938 and 1939	425
XV. Member Bank Earnings per \$100 of Earning Assets, 1938	427
XVI. Gross Losses on Loans and Investments, 1938	427
XVII. Bankers' Acceptances Outstanding	433
XVIII. Commercial Paper Outstanding	441
XIX. Brokers' Loans Made by Reporting Member Banks in New York City	444
XX. Treasury Notes, Bills and Certificates	446
XXI. Interest Rate, Discount or Yield	450
XXII. Reduction in Working Reserves, Per Cent of Gross Deposits, National Banks	465
XXIII. Indexes of Wages, Salaries and Cost of Living in Germany (1914-1923)	564
XXIV. Balance Sheet of the B.I.S., 1930 and 1931	623
XXV. Balance Sheet of the B.I.S., 1940	624 and 625
XXVI. Banks Suspended and Reopened, by Years, 1921-1930	629
XXVII. Bank Suspensions: Number, Classified Ac- cording to Capital Stock, 1921-1930	630
XXVIII. Bank Suspensions by Size of Town or City, 1921-1930	631
XXIX. Bank Suspensions by Sections, 1926- 1930	632
XXX. Bank Suspensions, 1931-1932	633
XXXI. Banks Suspended and Nonlicensed Banks in Liquidation or Receivership, Jan- uary 1 to December 31, 1933; and Nonlicensed Banks on Selected Dates in 1933	634

MONEY AND BANKING

xv

	PAGE
XXXII. Bank Suspensions, 1933-1941	636
XXXIII. Federal Deposit Insurance Corporation .	639
XXXIV. Summary of Branch Banking Develop- ment, 1924-1930	646
XXXV. Group Banking in the United States ; June 30, 1929 and 1930	648
XXXVI. Loans and Investments of Banks in, and not in, Chains or Group Systems, Oper- ating and not Operating Branches, by Areas, June 30, 1930	650
XXXVII. Geographic Distribution of American Banking Offices Abroad ; June 30, 1939 .	655
XXXVIII. Number and Resources of Banks in the United States, by Classes, 1921-1940 .	657
XXXIX. Governmental Corporations and Credit Agencies, December 31, 1940 .	662 and 663
XL. Selected Items from the Combined State- ments of the Federal Reserve Banks, 1917-1918	694
XLI. Selected Items from the Combined State- ments of the Federal Reserve Banks, 1919-1922	697
XLII. Open Market Rates, New York City .	705
XLIII. Savings Deposits and Depositors . .	800
XLIV. The Federal Land Bank Loan	812

PART I
NATURE AND DEVELOPMENT

MONEY AND BANKING

CHAPTER I

THE NATURE AND FUNCTIONS OF MONEY

Introduction.—Money resembles any other mechanism because it attracts little attention when it is functioning properly, but is a source of much irritation when it is not. Perhaps this is the chief explanation of a long-standing interest in the subject, for the world has suffered intermittently from currency disturbances since the money machine first came into general use. The problem which confronts the student of money is to determine how this essentially simple and indispensable piece of economic machinery may be made to operate smoothly in the best interests of society. In order to do this it will be necessary to study in detail the relation of different kinds of money to each other and the relations which exist between money and goods. Before beginning this task, however, we must decide just what is meant by money, why it is essential to the operation of the economic system, and what functions it may properly be expected to perform. The present chapter will be devoted to a survey of these elementary characteristics of money.

THE NATURE OF MONEY

A definition of money.—The chief purpose of money is to act as a medium of exchange. In any developed economic system in which the production and distribution of goods are left largely to individual initiative, most of the people are engaged in producing goods and services which they do not themselves want, but which they expect to exchange for goods and services, produced by others, which they do want. In these circumstances, some common medium is essential by which these necessary exchanges can be effected.

In primitive communities, where the inhabitants are largely self-sufficient and only occasionally have surplus

products which they wish to exchange for something else, barter—the direct exchange of goods for goods—may be used to a limited extent. Even under such simple conditions, however, attempts at barter are likely to encounter difficulties. To illustrate, suppose a farmer has a cow which he wishes to trade for some wheat and potatoes. One of his neighbors may have wheat and potatoes, but may not want a cow. Another neighbor may want a cow and also may have some wheat to exchange for it, but no potatoes. Unable conveniently to divide the cow, and unable to find anyone who wants a cow and has both wheat and potatoes to exchange for it, our farmer cannot effect a trade. This illustrates the two chief difficulties of exchange by barter, namely, a lack of *coincidence* or *mutuality* of wants of the two parties wishing to effect an exchange, and a lack of *divisibility* in the case of the more valuable goods to be exchanged. Moreover, even when exchange by barter is possible, there is no real *market* and hence no *single price* for the goods that are being exchanged. Each pair of traders must strike their own bargain, and the one who is most anxious to effect the exchange is practically certain to be worsted.

Obviously, as soon as the economic system has developed beyond the primitive stage, almost no exchange by barter is possible. The producer exchanges his goods for some common medium which he then uses to obtain other goods. This common medium of exchange, whatever may be used for the purpose, we shall call money. It will be seen later, however, that the use of money as a medium of exchange naturally leads to its service in certain other capacities. We shall therefore take these other services into account in defining money as follows: *Money is anything which is devoted to use primarily as a medium of exchange and which, because of this use, performs certain other useful functions.*¹ In this definition the word *primarily* deserves special emphasis. If a man exchanges a bicycle for fifteen bushels of

¹ Compare this with Professor Taylor's definition of money: "Money is something which is specially designed for, and devoted to, serving as a medium of exchange, although it is also put to other uses for which it is specially fitted either because of its being a recognized medium of exchange or because of the nature of the substance from which it is made." *Some Chapters on Money*, p. 11. These definitions, while similar, differ in respect to scope, Professor Taylor's being somewhat less inclusive than the one given in the text.

apples and later exchanges these apples for a suit of clothes, he has made use of the apples as a medium of exchange, but this would not entitle apples to inclusion under the head of money unless they were primarily devoted to this use, which would certainly not be the case since very few people would be willing to take apples in exchange for other goods unless they wanted them for consumption purposes.

Desirable characteristics of money.—In the preceding paragraph it was stated that apples could not be considered as money because they would not be readily accepted in exchange for other goods except by individuals who actually wanted the apples themselves. Only comparatively few people want apples at any particular time, and those desiring them want only a limited quantity, whereas a medium of exchange, to be widely used, must possess general acceptability, i.e., it must be readily accepted by practically *every-one* in exchange for other goods or services. *Acceptability*, then, is the all-important characteristic of a satisfactory medium of exchange and really covers the other characteristics which a desirable sort of money should have.

Other characteristics of money are significant mainly to the extent that they increase its acceptability. The most important of these other characteristics are (1) portability, (2) durability, (3) homogeneity, (4) divisibility, (5) cognizability, and (6) stability of value. Ability to carry money about, or transport it easily, clearly adds to the readiness with which it will be accepted, for such things as carpets—which possess some of the necessary attributes of money—could scarcely be used as a medium of exchange because of their bulk and clumsy form. The fact that eggs break easily and are subject to decay would prevent their ready acceptance even if they possessed all the characteristics mentioned above except indestructibility. Another objection to eggs is that they are not strictly homogeneous, some eggs being much larger, and of better quality, than others. Money must also be divisible to be acceptable. Houses and locomotives could not well be used as money because, among other things, they cannot be divided into fractions and used to obtain other goods of less value than they themselves possess. Unless money can be easily recognized as such, it will

prove difficult to persuade people to accept it in exchange for their own goods or services. Some precious stones, for example, have a number of desirable characteristics of money, but the difficulty, on the part of the layman, in distinguishing between real gems and imitations would probably preclude the wide use of such jewels as money. The problem of preventing the counterfeiting of money is one which has never been entirely solved, but the solution is much less difficult when money is distinctive in appearance and easily recognized by the majority of people. Finally, the knowledge that a given amount of money will remain relatively stable in value increases its acceptability, for the recipients are then sure that they may hold the money for some time if they so desire without taking the risk of any great depreciation in its value.

Up to this point the discussion has been concerned with the general nature of money and its more important characteristics. In the following section we shall turn our attention to the services which money performs in the economic community.

THE FUNCTIONS OF MONEY

Money as a medium of exchange.—The general nature of the service performed by money as a medium of exchange has been described, but certain points in connection with the performance of this function need emphasis. In a barter transaction there is but one step. Farmer Brown exchanges five bushels of wheat for half a ton of Farmer Smith's hay, and the transaction is completed. If money had been used in the same transaction, the number of steps involved would have been increased to three. (1) Wheat would have been exchanged for money; (2) the money would have been held for a longer or shorter period; and (3) the money would then have been exchanged for hay. The first and third of the steps require no further mention, but the second merits some added discussion. It is plain that one of the advantages incidental to the use of money is the ability to defer the second part of the exchange transaction (step 3) until such time as it becomes convenient or desirable to use the money in obtaining other goods. The farmer who sells his wheat for money may not want hay for several months and,

if the money is of the proper sort and is stable in value, he will find it much more convenient to retain his claim to wealth in the form of money than to buy the hay immediately and hold it until he wishes to use it. ✓

In the example just given, the holding of money for a few months by the farmer who had sold his wheat was merely a convenience to him, and, in itself, would not be productive of any far-reaching results. If, however, a great many people in the community decide, for some reason, to hold a larger proportion of their incomes than usual in the form of money, or to hold the accustomed proportion for a longer time than usual, or to do both of these things, the economic effects of such action may be decidedly significant. A detailed treatment of this aspect of money exchange must be postponed to a later chapter (Chapter XXVI). For the present we shall merely note the significance of the second step in the use of money as a medium of exchange, i.e., the holding of money for an indeterminable period until it is desired by the holder to spend it for goods, and pass on to a consideration of certain other functions of money which are largely derived from its use as a medium of exchange.

Money as a measure of value. — Since money has to have value to act satisfactorily as a medium of exchange, it naturally takes on the added function of serving as a measure of the values of all other economic goods. If, under a barter régime, a man who has a surplus of wheat finds that he can exchange 3 bushels of wheat for (*a*) 1 crate of eggs, (*b*) 6 bushels of corn, (*c*) 1 hat, or (*d*) 2 bushels of apples, he would then consider a bushel of wheat to be worth $\frac{1}{3}$ of a crate of eggs, or 2 bushels of corn, or $\frac{1}{3}$ of a hat, or $\frac{2}{3}$ of a bushel of apples. From the point of view of the seller of eggs, a crate of eggs would be worth 3 bushels of wheat, 6 bushels of corn, 1 hat, or 2 bushels of apples. Now all of this is very confusing and gives us no clear idea of the economic values of any of the commodities in question. Each party to an exchange of the sort mentioned naturally thinks of the value of the goods he disposes of in terms of that of the goods he receives, but he must change his measuring stick from eggs to corn to apples, etc., in each of his various transactions. If now, instead of measuring the value of each

commodity in terms of each other commodity for which it may be exchanged, the value of each commodity is referred to some one thing, we shall have an understandable measure of the values of different goods. Since money, in acting as a medium of exchange, is the one thing for which practically all goods are exchanged sooner or later, it will almost inevitably be chosen as the thing in terms of which the values of all other goods will be measured. The situation is greatly simplified. In our illustration, if wheat is worth 1 dollar a bushel, eggs will be worth 3 dollars a crate, corn $\frac{1}{2}$ dollar a bushel, hats 3 dollars each, and apples, $1\frac{1}{2}$ dollars a bushel.

The measurement of values by means of money is thus not essentially different from the measurement of any property or characteristic. In measuring a door for a screen, a yardstick divided into feet and inches will be used. The measurements are then recorded and an order may be sent for the amount of screening needed. The hardware dealer, having a similar yardstick, will be able to cut the screening in the proper dimensions, so that it will be sure to fit the door, without his having seen the door at all. Without the convenience of this common measure—the yardstick—the owner of the house would have had to measure the length and breadth of the door with a piece of string, a stick, or some other object, and then take or send these pieces of string or wood to the hardware dealer to use in cutting the screen. The yardstick, then, offers a common measure of length, known to all, and greatly simplifies the measurement of different lengths and makes them understandable. In like fashion, the monetary unit, which is used by all as a medium of exchange, furnishes a common measure of the heterogeneous values of goods and services. A farmer, for example, may have an old-style automobile which he wants to sell to a man from the city. The latter, upon inquiring what the farmer thinks the machine to be worth, receives the reply that he values it at about three small heifers. The city man, knowing nothing of heifers or of their probable worth, is as much in the dark as ever. If told, however, that the machine is worth \$60, he will immediately know where he stands, for he knows how much of the things he is accustomed to buy can be purchased for \$60 and is, there-

fore, able to come to some decision regarding the purchase of the automobile.

In most cases, the use of money as a measure of value is simply incidental to its use as a medium of exchange, for whenever a good is exchanged for money it will naturally be valued in terms of the money received for it. Similarly, when goods are exchanged directly, each party to the exchange is likely to value the goods given in terms of those received. The man who exchanges 3 bushels of wheat for one crate of eggs, naturally measures the value of each bushel of wheat at $\frac{1}{3}$ of a crate of eggs. Consequently, the measure of value function of money may seem to be co-terminous with its medium of exchange function, but in some instances money may serve in the former use without acting as a medium of exchange. A certain individual with, let us say, a desk wishes to exchange this directly for a friend's bookcase. They compare values. The owner of the desk thinks it is worth \$65, while his friend believes his bookcase to be worth \$75. If they are agreed on the relative value of the two articles, the man owning the desk offers, perhaps, to throw in a dictionary worth \$10, and the trade is made. Such instances, while relatively few in number, occur with sufficient frequency to warrant our consideration of the measure of value function of money as one which may be distinguished from its medium of exchange function.

Other functions of money.—Certain other functions of money which arise out of its use as a medium of exchange should receive mention. Most important among these, perhaps, is the use of money as a *guarantor of solvency*. Every business has certain claims against it which can be settled only in money, the latter having generalized purchasing power and hence being satisfactory to all in the settlement of claims. All business concerns have claims against others also, at practically all times and they expect these to be paid in money. The receipts from the collected claims may furnish the exact wherewithal to meet the money payments which have to be made. But no business concern dares to rely upon such a balancing of receipts and expenditures at all times. Payments to others must be made, dollar for dollar, while expected receipts may not materialize in full. Further, even

when receipts come in as expected, they probably will not coincide exactly with payments at any particular time, and unlooked-for contingencies may arise from time to time which can be met only by a money payment.

For all these reasons, every business of any consequence feels the necessity of keeping a certain proportion of its assets in the form of money at all times. A strong cash position, as the term goes, adequately insures the ability of an enterprise to meet its debts as they come due, and thus maintain solvency. It is undesirable to retain too large a proportion of assets in the form of cash, for such procedure reduces income. The proper balance between safety and profit must be struck and this balance will vary from time to time with the condition of business in general and with other factors. Consequently, the amount or proportion of assets which is kept in the form of money varies considerably from one time to another, and we shall see later that this factor has an important bearing on the determination of the value of money. At this point, however, we are mainly concerned with the function that money performs in preventing insolvency by insuring business enterprises of the necessary means to meet their legal obligations when they fall due.

Money may also be used as a *storer of value*. A satisfactory medium of exchange is stable in value, and this characteristic permits money to serve as a means of storing up value for indefinite periods. Under modern secure conditions this is merely a part of the medium of exchange function, money being held for indeterminate periods before it is spent largely as a matter of convenience. At times in the world's history, however, when property has been subject to seizure by the ruling authorities, or to theft by robbers and marauders, or to destruction by invaders, money has played an important part as a storer of value. Gold and silver coins having a high value per unit of bulk and being extremely durable, could be hidden easily for as long a time as necessary. Used in this sense, the storer of value function of money is distinct from its medium of exchange function, but this is a distinction of little importance in modern civilized countries.

Another, and relatively unimportant, function of money is that of serving as a *gift medium*. This is not an exclusive function of money, but the fact that money has the property of universal or generalized purchasing power makes it a highly desirable medium to use for this purpose. A person very often wishes to remember someone, but has no idea just what the individual has or would like to have. The easiest solution of the problem is to send money as a gift, so that the recipient may make his own choice and select what will be most useful or pleasurable to him in view of the size of the gift.

Finally, the use of money as a medium of exchange has led to its recognition and use by governments as a *legal* means of payment, both of private debts and of public duties, fines, penalties, and taxes. The latter are one-sided payments in which the individual receives no specific benefit in return for the money given to the government, but merely shares in the general benefit which the government confers upon the group as a whole. As such, they are akin to gifts as far as their relation to the medium of exchange function of money is concerned. That is, the purchasing power embodied in the money is transferred to the state, and the state is then enabled to use it in the manner most convenient to obtain the goods and services incidental to running the government. Thus the state can satisfy its wants more efficiently than if it extracted goods and services directly from the taxpayers, since the latter are frequently unable to furnish either the goods or the services which the state is likely to require.

Money as a loan medium and standard of debt payments.—The functions of money as a *loan medium* and a *standard of deferred payments* have frequently received considerable emphasis. These functions, however, follow naturally from the use of money as a medium of exchange and are scarcely to be distinguished from the latter. Money acts as a loan medium simply because it is the recognized medium of exchange. The borrower of money can use the proceeds of the loan to purchase the goods or services which he wants to acquire, while he would find it difficult, indeed well-nigh impossible, to borrow these goods directly.

That money performs no distinctive or peculiar service in acting as a standard of debt payments has been well demonstrated by Professor Taylor as follows:²

First, money surely cannot be the standard of debts or contracts in general but only of money debts. That is, money obviously cannot be the standard of a promise to deliver 10,000 bushels of wheat or 500 cords of wood or 1500 barrels of apples. The standard for the wheat contract must be some sort of wheat, for the wood contract some sort of wood, for the apple contract some sort of apples. The statement, then, can have no other meaning than that money forms the standard of *money contracts*. But, secondly, to say that money constitutes the standard of *money contracts* is little short of absurd. If it means anything, it is a mere identical expression. To say that a contract is a money contract is to say that money determines the thing which must be delivered, and so is to say that money is the standard of this particular contract.

Borrowers prefer to borrow money rather than goods because great difficulties are thereby avoided. Creditors prefer to receive payment in money for the same reason. The difficulties which are avoided are identical with those which impede exchange by barter, and the preferences of debtors and creditors are directly attributable to the general acceptability of money in exchange for goods. It should be obvious, therefore, that the performance by money of the offices of loan medium and standard of debts is purely incidental to its use as a medium of exchange.

THE IMPORTANCE OF MONEY

Advantages.—The various functions of money which have just been discussed show clearly the advantages of a money economy over one conducted by means of barter exchange. Under barter, practically no development of specialization and division of labor is possible, while the use of money permits a high degree of development along these lines. It is not necessary to dilate here upon the advantages which society derives from the widespread division of labor, specialization of machinery, and large-scale production which characterize our present economic system, advantages which are familiar to every student of elementary economics. It is necessary, however, to sound a note of warning against attributing these advantages too fully to the use of money. An

² *Some Chapters on Money*, p. 29.

oiling system is essential to the satisfactory operation of a motor car, yet one would hardly ascribe all of the advantages of the automobile to the existence of its oiling system. The motor, gears, wheels, and other parts must be available and ready to render service if the oiling system is to be of any use. In the same fashion, a wide market for goods, an efficient transportation system, and other factors are essential parts of any highly-developed exchanging order.

The analogy may be carried a step farther. The advantages to be derived from a given kind of automobile result *largely* from the efficiency of its motor and the perfection of its technical construction. Given these things, a satisfactory oiling system is necessary to insure smoothness of operation, but no oiling system, however perfect, is capable of making a good automobile if its motor, gears, or axles are not serviceable. So it is with our exchanging economic order. The main advantages of such an order are attributable, in large part, to the width and steadiness of the markets for which goods are produced and the efficiency of the systems of transportation, marketing, and communication, as well as the efficiency of the factors of production. Given satisfactory conditions along these lines, and a sound monetary system will tend to make the economic order function smoothly by facilitating exchanges, or, in terms of our analogy, by "oiling the wheels of trade."

Disadvantages.—In considering the disadvantages attendant upon the use of money, a similar attitude of caution must be maintained. A bad monetary system will hamper trade just as a poor oiling system will interfere with the efficient operation of a motor car. If business is unduly restricted because the amount of money available is too small, or if speculative tendencies are unduly aggravated by a plethora of money, or if borrowed money is put to improper uses because of questionable credit policies on the part of the banking system, it is then highly advisable to direct attention to the monetary system in an effort to eliminate the difficulties which have arisen. On the other hand, one would hardly attempt to place the blame for the dissatisfaction with one of the early models of a certain car at the door of that car's oiling system when the trouble was

quite obviously to be traced to a defective rear axle. The manufacturers replaced the troublesome axle with a new one and greatly improved the car. Such a step was entirely logical. Yet, in connection with our economic troubles, there is a decided tendency to adopt a less logical attitude and to advocate some change in our monetary arrangements as a remedy for any and all economic disturbances.

The analogy which has been drawn between a motor car and the present-day economic system may, no doubt, be carried to extremes. Nevertheless, the comparisons which have been drawn above are, in the main, sound. Money is an instrument which performs a most useful service and, as such, its place in the economic system deserves careful attention. It is not to be supposed, on this account, that money alone is responsible either for all the advantages or for all the drawbacks of present-day economic society. An unsound monetary system will doubtless result in grave economic disorders which may, in turn, be ameliorated by improving the exchange mechanism of the country. On the other hand, when the money mechanism is sound, relief for economic difficulties must be sought in other channels. A study of the principles of money is important in that it enables us to distinguish between disturbances which arise from an unsound system of money and those which have their origin in other sources.

Before proceeding with a detailed examination of the principles and practices connected with the use of money and credit, we shall conclude this chapter with a brief discussion of the origin and development of money.

THE ORIGIN AND DEVELOPMENT OF MONEY

Commodity money.—In the primitive stages of economic development, various commodities have at times been used to perform the more important functions of money. The commodity which came to serve in this capacity was one which was widely used in the community in question and which had as many of the desirable characteristics of money as possible. Thus, skins appear to have been used as money by non-tropical hunting races ; oxen and sheep by peoples in the pastoral state ; and tea-blocks, cocoanuts, cocoa-beans, dates,

sugar, corn, wheat, and tobacco among agricultural peoples in various geographical locations. Dried fish have been used in a monetary capacity by certain more or less isolated fishing communities. Among manufactured articles, linen, strips of cotton, shirts, wax-cakes, javelins, and straw mats have served similarly in various parts of the globe. In the way of minerals, salt-tablets and various raw metals have been resorted to upon occasion.³

There may well be some question as to whether all of the commodities mentioned in the preceding paragraph should really be classed as money in view of the services which they performed. It is probable that some of them, particularly the skins and oxen of the early stages of social development, served chiefly as measures of value and were used only sporadically as media of exchange. Be that as it may, it is safe to assert that no great economic development could well have taken place without the use of a more highly satisfactory type of money than any of those just described. Certainly, nothing which even faintly resembled a monetary *system* could be said to exist until some instrument was actually *designed* for use as a medium of exchange.

The metals as money.—Historically, such designed instruments of exchange have usually put in an appearance with the coining of money from the metals, although the metals in uncoined form were used as exchange media long before coining became common. The coinage of metals developed early in the Mediterranean region, silver pieces being issued in Ægina about the middle of the eighth century B.C., while coins of gold, electrum, and copper were also used in this territory at early dates. Silver coins were first struck officially by the Romans in 268 B.C., and the first issue of gold coins occurred about 240. Bronze coins had been in use in Italy, however, since the latter part of the fourth century B.C.⁴

From these early, and very simple, monetary systems (if such they may be called), the intricate and highly efficient

³ For an annotated account of primitive forms of money, see Roscher, *Political Economy*, Book II, Chapter III, Sec. CXIX, text and footnotes, especially footnote 12; and Jevons, *Money and the Mechanism of Exchange*, Chapter IV.

⁴ See Burns, *Money and Monetary Policy in Early Times*, Chapter VI, for a complete and careful discussion of the materials of early currencies.

arrangements of the present day, have developed. While copper and bronze coins are still in use, their appearance in modern monetary systems seems to have followed the use of silver,⁵ and for many years the leading commercial countries have employed silver or gold or both metals as a basis for their monetary systems. Some isolated countries have used other metals as money because of their availability, but silver and gold have predominated among highly-developed peoples since the time of the Romans.

The choice between gold and silver seems to have depended partly on their relative values and partly on the preferences of the peoples concerned. The Germans used silver as a basis for their monetary system prior to 1870, the laws of 1871–1875 placing that country, legally, upon a gold standard.⁶ England adopted a full gold basis as early as 1816, but preceded the other leading nations of Europe in so doing. France was legally on a bimetallic basis (silver or gold) from 1803 to 1878, while, from the formation of the Latin Monetary Union in 1865 until 1878, Switzerland, Belgium, and Italy—the other members of the original Union—as well as France, had, theoretically at least, a bimetallic standard.⁷ From 1878 on, the majority of the leading countries of Europe have been on a gold standard, although silver coins have been retained in use in their monetary systems.⁸

Reasons for the adoption of gold and silver.—The reasons for the widespread adoption of gold and silver as money are to be found in the excellent money characteristics which these metals possess. Both metals have a high value in relation to their bulk which makes possible the manufacture of coins of convenient sizes, i.e., coins which have the characteristic of *portability*. These metals are also malleable, so that the attribute of *divisibility* may be readily attained with their use as money. Both gold and silver are very *durable*, especially when alloyed with small quantities of other metals, for they are not subject to any marked deterioration

⁵ Roscher, *op. cit.*, Book II, Chapter III, Sec. CXIX, footnote 3.

⁶ *European Currency and Finance*, Vol. I, p. 387.

⁷ For a complete account of the Latin Monetary Union, see Willis, *A History of the Latin Monetary Union* (Chicago, 1901).

⁸ The situation in the United States will be treated in Chapter III.

upon exposure to air as are some metals, such as iron. They are *homogeneous* also, for gold and silver can vary only in degree of purity. There are not different kinds of gold nor different kinds of silver. As to *cognizability*, the metals have characteristic lusters which are easy to distinguish, and their malleability permits them to be minted into coins which are readily recognized by all. Lastly, both metals are much sought after for purposes of ornament or other use and, being relatively scarce, they thus acquire a high unit value. Further, because they are in the nature of luxuries rather than necessities, and because they are very durable (so that the annual production constitutes but a trifling portion of the total stock), they have a *stability of value* which is greater than that of most other goods. In stability of value, gold surpasses silver. Gold also contains a greater value per unit of bulk than does silver, so that it is more conveniently handled when payments of large size have to be made. It is, perhaps, these two points of superiority—particularly the first—which have resulted in the final choice of gold by the majority of advanced nations as the basis for their monetary systems.

Paper money.—One other type of money which has developed in conjunction with the use of gold and silver and which plays an important part in modern monetary systems is paper money. The characteristics of this sort of money will be dealt with later. For the present, we shall merely note that it is, as a rule, more convenient to use than metallic money, and that its use frequently, though not always, results in an economy in the amount of gold or silver that is necessary for the proper functioning of the monetary system. Paper money was widely used in China as early as the twelfth century,⁹ and it has found extensive use in the form of bank notes for over a century in practically all civilized countries.¹⁰

In connection with the evolution of paper money, as also with the other sorts of money already described, it must be remembered that its development has been closely related

⁹ *The Travels of Marco Polo*, Chapter XXIV, footnote (New York 1926).

¹⁰ "It was left, however, for the sixteenth century of our era to develop the bank note in something like its modern form, and for the nineteenth century to spread its use over the civilized world." Conant, *A History of Modern Banks of Issue*, p. 1 (New York-London 1927).

to the state of civilization in various countries and at different times. The ancient civilizations in China and the Mediterranean region had more advanced monetary systems than those of the Dark Ages hundreds and even thousands of years later, while at present there are tribes of natives who still use beads and trinkets as money, and undeveloped or isolated peoples who still make use of some commodity in this capacity. We are not particularly concerned with either the ancient monetary systems or the present crude exchange methods of certain peoples and regions. Rather, we shall concentrate our attention upon the characteristics of modern monetary systems which are typical of advanced countries. To this end, we must first obtain a clear notion of the attributes of such a typical system.

The characteristics of the typical monetary system.—

The monetary system of the modern advanced country comprises *the entire group of arrangements whereby exchanges of goods and services are mediated and the monetary needs of the country provided for*. This group of arrangements may, for purposes of study, be naturally and conveniently divided into two parts which include (1) the governmental aspects, and (2) the banking aspects, of the monetary system. Under the former head, we shall consider the standard of value, the denomination system, provisions relating to legal tender and coinage, and the various kinds of money which are coined or issued by the government. The matter considered under the second head will relate to bank notes and the check system. It is part of the subject matter of commercial banking and, as such, will be discussed in subsequent chapters (Chapters XI and XII). The following chapter will be devoted to a treatment of the governmental phases of the monetary system.

REFERENCES

In view of the general nature of the present book, it seems advisable to insert a general reference list on money and banking works at this point, confining the lists at the ends of subsequent chapters to references which are of a specialized nature or which have been particularly helpful to the author in the preparation of his material. The bibliography of money and banking is, of course, extended, and it will be possible to include here only a few of the more important English works on the subject.

NATURE AND FUNCTIONS OF MONEY 19

TEXTBOOKS

- Agger, E. E. *Organized Banking*. New York. 1918.
- Bell, J. W. *A Guide to the Study of Money and Banking*. Evanston (Second Revised Edition). 1934.
- Bogen, J. I., Foster, M. B., Nadler, M., and Rodgers, R. *Money and Banking*. New York. 1936.
- Coulborn, W. A. *An Introduction to Money*. New York. 1938.
- Dewey, D. R., and Shugrue, M. J. *Banking and Credit*. New York. 1922.
- Dowie, G. W. *Money and Banking*. New York. 1936.
- Dunbar, C. F. *The Theory and History of Banking*. New York (Fifth Edition). 1929.
- Edie, L. D. *Money, Bank Credit and Prices*. New York. 1928.
- Edwards, G. W. *Principles of Banking and Finance*. New York. 1932.
- Foster, B. and Patterson, E. L. *Banking*. New York. 1935.
- Foster, M. B. and Rodgers, R. *Money and Banking*. New York. 1935.
- Garis, R. L. *Principles of Money, Credit and Banking*. New York. 1934.
- Harr, L. and Harris, W. C. *Banking Theory and Practice*. New York (Second Edition). 1936.
- Holdsworth, J. T. *Money and Banking*. New York (Sixth Edition). 1937.
- James, F. C. *The Economics of Money, Credit and Banking*. New York (Third Edition). 1940.
- Johnson, J. F. *Money and Currency*. New York. 1905.
- Kemmerer, E. W. *Money*. New York. 1935.
- Kilborn, R. D. and Woodworth, G. W. *Principles of Money and Banking*. New York (Fourth Edition). 1937.
- Langston, L. H. and Whitney, N. R. *Banking Practice*. New York. 1921.
- Leaf, W. *Banking*. New York. 1927.
- Leffler, R. V. *Money and Credit*. New York. 1935.
- Luthringer, G. F., Chandler, L. V. and Cline, D. C. *Money, Credit and Finance*. Boston. 1938.
- Magge, J. D. *An Introduction to Money and Credit*. New York. (Revised Edition). 1933.
- Moulton, H. G. *The Financial Organization of Society*. New York (Fourth Edition). 1938.
- Phillips, C. A. *Readings in Money and Banking*. New York. 1916.
- Prather, C. L. *Money and Banking*. Chicago (Revised Edition). 1940.
- Robertson, D. H. *Money*. New York (Revised Edition). 1929.
- Rodkey, R. G. *The Banking Process*. New York. 1928.
- Rufener, L. A. *Money and Banking in the United States*. Boston. 1937.
- Sayers, R. S. *Modern Banking*. New York. 1938.
- Scott, W. A. *Money and Banking*. New York (Sixth Edition). 1926.

- Steiner, W. H. *Money and Banking*. New York. 1933.
 Thomas, R. G. *Modern Banking*. New York. 1937.
 Westerfield, R. B. *Money, Credit and Banking*. New York. 1938.
 White, H. *Money and Banking*. Boston (Revised and Enlarged by Tippetts, C. S. and Froman, L. A.). 1935.
 Willis, H. P. *American Banking*. Chicago. 1917.
 Willis, H. P. and Edwards, G. W. *Banking and Business*. New York (Revised Edition). 1925.
 Wright, I. *Readings in Money, Credit and Banking Principles*. New York. 1926.

MONEY AND MONETARY THEORY

- Anderson, B. M. *The Value of Money*. New York. 1917.
 Angell, J. W. *The Behavior of Money: Exploratory Studies*. New York. 1936.
 Bakewell, P. *Past and Present Facts About Money in the United States*. New York. 1936.
 Cannan, E. *Money: Its Connexion with Rising and Falling Prices*. London (Fourth Edition). 1923.
 Cannan, E. *Modern Currency and the Regulation of its Value*. London. 1931.
 Currie, L. B. *The Supply and Control of Money in the United States*. Cambridge (Second revised edition). 1935.
 Donaldson, J. *The Dollar: A Study of the "New" National and International Monetary Systems*. New York. 1937.
 Ellis, H. S. *German Monetary Theory 1905-1933*. Cambridge. 1934.
 Fisher, I. *The Purchasing Power of Money*. New York. 1911.
 Foster, W. T. and Catchings, W. *Money*. New York. 1923.
 Hawtrey, R. G. *Currency and Credit*. London (Third Edition). 1928.
 Hayek, F. A. *Monetary Theory and the Trade Cycle*. New York. 1932.
 Helfferich, K. *Money*, Vols. I, II. New York. 1927.
 Jevons, W. S. *Money and the Mechanism of Exchange*. New York 1893.
 Kemmerer, E. W. *Money and Credit Instruments in Their Relation to General Prices*. New York. 1909.
 Keynes, J. M. *A Treatise on Money*, Vols. I, II. New York. 1930.
 Keynes, J. M. *General Theory of Unemployment, Interest and Money*. New York. 1936.
 Kinley, D. *Money*. New York. 1913.
 Knapp, G. F. *The State Theory of Money*. London. 1924.
 Laughlin, J. E. *The Principles of Money*. New York. 1926.
 Laughlin, J. E. *Money, Credit and Prices*, Vols. I, II. Chicago. 1931.
 Marget, A. W. *The Theory of Prices*, Vol. I. New York. 1938.
 Marshall, A. *Money, Credit and Commerce*. London. 1923.
 Nicholson, J. S. *Money and Monetary Problems*. London. 1901.

NATURE AND FUNCTIONS OF MONEY 21

- Rist, C. *History of Monetary and Credit Theory from John Law to the Present Day*. New York. 1940.
- Saulnier, R. J. *Contemporary Monetary Theory*. New York. 1938.
- Shaw, W. A. and Wigglesworth, A. *The Principles of Currency, Credit and Exchange*. New York. 1934.
- Taylor, F. M. *Some Chapters on Money*. Ann Arbor. 1906.
- von Mises, L. *The Theory of Money and Credit*. New York. 1934.
- Wicksell, K. *Lectures on Political Economy*, Vol. II (Money). New York. 1935.
- Whittlesey, C. R. *International Monetary Issues*. New York. 1937.

BANKING AND BANKING THEORY

- Beaty, J. Y. *How to Understand Banks*. Chicago. 1935.
- Chapman, J. M. and Westerfield, R. B. *Problems in Banking, Money and Credit*. New York. 1927.
- Ebersole, J. F. *Bank Management*. New York. 1931.
- Fraser, C. E. *Problems in Finance*, Vol. II. New York. 1928.
- Gilbart, J. W. *Works*, Vols. I-IV. London. 1865.
- Kniffin, W. H. *The Practical Work of a Bank*. New York. 1915.
- Kniffin, W. H. *American Banking Practice*. New York. 1921.
- Kniffin, W. H. *Commercial Banking*, Vols. I, II. New York. 1923.
- Langston, L. H. *Practical Bank Operation*, Vols. I, II. New York. 1923.
- Minty, L. L. *American Banking Methods*. London. 1923.
- Steiner, W. H. *Some Aspects of Banking Theory*. New York. 1920.
- Trant, J. B. *Bank Administration*. New York. 1931.
- Willis, H. P. and Chapman, J. M. *The Banking Situation: American Post-War Problems and Developments*. New York. 1934.
- Willis, H. P., Chapman, J. M. and Robey, R. W. *Contemporary Banking*. New York. 1933.

REPORTS AND DOCUMENTS

- Annual Report of the Comptroller of the Currency.
- Annual Report of the Board of Governors of the Federal Reserve System.
- Annual Report of the Bank for International Settlements.
- Federal Reserve Bulletin.

REFERENCES ON CHAPTER I

- Burns, A. R. *Money and Monetary Policy in Early Times*. New York. 1927.
- Ridgeway, Sir W. *The Origin of Metallic Currency and Weight Standards*. Cambridge. 1892.
- Roscher, W. *Principles of Political Economy*. (Lalor's Translation.) Chicago. 1882.
- Shaw, W. A. *The History of Currency, 1254-1894*. New York. 1895.

CHAPTER II

MONETARY STANDARDS AND SYSTEMS

Introduction.—The most important feature of the modern monetary system is the standard of value under which the system operates. By the beginning of the twentieth century, the majority of the countries of the world had adopted the gold standard. There was a widespread departure from gold as a standard of value during the Great War, followed by a general return to this standard during the third decade of the century after the termination of hostilities.

The great depression, however, forced a large number of countries off gold once more and other nations have since followed suit. The result is that no country today maintains a gold standard as the term was formerly understood, although it appears that some of them still contemplate a possible return to gold in the more or less distant future.

The question of the standard, therefore, has assumed a large significance. The problem of whether to return to the gold standard or to attempt some other arrangement is by no means a matter of mere academic interest, but has a very real practical importance. It is out of the question to try to reach a decision on this matter without a thorough analysis of the principles governing the value of money, the control of credit, and international exchange. Accordingly, the discussion in this chapter will be devoted to the characteristics and requirements of the various standards of value which have been resorted to in the past or proposed for the future, leaving to a later chapter (Chapter XXXVI) the decision as to the best course to pursue.

THE STANDARD OF VALUE

The rôle of the standard of value in the monetary system.—The service of money as a general measure or standard of values has been described in some detail in the preceding

chapter and requires no further elucidation at this point. It is necessary, however, to indicate the nature of the part played by the standard of value *within the monetary system*. Its chief function in this connection is to *fix the value* of all the different kinds of money which are used in the system. The performance of this function may be accomplished by (1) *incorporating* the standard of value in the money itself, or (2) *redeeming* or *converting* the moneys of the system in the standard of value, without any restriction on the uses to which the standard of value, so obtained through redemption, is put. It is also essential that the standard of value be freely convertible into the moneys of the system at will.

Prior to the Great War, modern countries as a rule had resorted to a combination of both of the preceding methods, embodying the standard of value in one kind of money and then providing for the conversion of all other moneys of the system, directly or indirectly, into the money containing the standard. After the Great War, however, when the countries of Europe returned to a gold basis, it became the practice of some countries not to coin money freely from the standard metal. The central banks of England and France, for example, were alone given the right to have gold coined at the mint, and were required to redeem their notes, not in gold coin, but in specified amounts of bullion.¹

Under this plan, the owner of the gold bullion who wished to obtain money sold his bullion to the central bank for notes or deposit credits instead of taking the gold to the mint for coinage. Thus the value of the moneys of the system was fixed by that of the gold into which they might be converted, even though the gold itself was not coined into money.

Another function of the standard of value is, to *settle balances* in international trade. Until relatively recently, most of the advanced countries of the world had adopted gold as a standard for reasons already noted and gold, as a result, formed an acceptable medium for making international payments. The money of one country, in the ordinary

¹ At the present time, both England and France are off the gold standard and the central banks of these countries are not required to redeem their notes in either gold coin or bullion.

run of events, is not acceptable to the people of foreign nations. But gold, when the basis of their own monetary systems, is readily acceptable in the form either of bullion or of coin. They will not use the latter directly as money, but since it contains the standard of value, they will accept it and have it restamped into the coin of their own country. This is proved by the fact that it is acceptable by weight only and not by tale or count. It is not the money, but the standard of value contained in it, that makes gold acceptable in the payment of foreign balances, so that this function belongs to the standard of value *per se* when an international gold coin standard is in operation.

It is also worth noting that at the present time, when but few countries have even a semblance of a gold standard, that gold continues to be used as a means of settling international balances. The fact that, for a great many years, gold was used in this capacity probably explains its continued use in spite of the fact that the gold standard has largely been abandoned, for the time being at least.

Possible different standards.—Although gold has occupied the leading position as a standard of value for highly-developed commercial countries since the last quarter of the nineteenth century, other standards have been widely used at times while still others have been suggested for the future. It seems advisable, therefore, to describe the requirements necessary to the maintenance of these various standards at this time. The most important types of systems, classified according to the standard of value, which have been either used or suggested are (1) monometallism, (2) bimetallism, (3) symmetallism, (4) the paper standard, (5) managed currency standards, and (6) the multiple commodity reserve standard. We shall consider these systems in the order named.

MONOMETALLISM

The gold coin standard.—Under a monometallic standard, the value of the moneys of the system must be kept equal to the value of a given weight of a single metal. Since by far the most common type of monometallism is the gold standard, the bulk of this section will be devoted to a discussion

of the possible forms of this standard of value. The first of these is the gold coin standard.

To maintain a gold coin standard the government must accept gold freely at the mint for coinage in unlimited quantities, the gold coins being returned to the parties who have brought the gold to the mint. Since the amount of gold contained in a coin of a given denomination is fixed by law, the free coinage of gold by the mint sets a lower limit on the price of gold as no one would sell gold in the market for less than the amount of gold coins which could be obtained at the mint.

If the mint levies a charge to cover the cost of coinage, the mint and market prices of gold may diverge by an amount equal to this charge. Moreover, if the mint will not exchange new coins for bullion immediately, but instead coins the actual bullion presented, the parties bringing the gold to the mint will have to wait a number of days before receiving the finished coins. In this case, the mint and market prices of gold may diverge by an amount equal to the loss of interest on the money involved during the coinage process.

If, however, the mint absorbs the cost of coinage and maintains a bullion fund from which coins are struck in advance, so that gold bullion brought to the mint may be immediately exchanged for gold coins, the lower limit of the price of gold will be identical with the mint price. To illustrate, if the law states that the money unit, which we may call a dollar for convenience, shall contain 24 grains of fine gold, and if gold coins can be obtained immediately without charge in exchange for bullion at the mint, the price of gold cannot go below \$20 per ounce (one ounce contains 480 grains) since an ounce of gold can always be turned into \$20 in gold coin at the mint.

The second requirement of the gold coin standard is that there shall be no restriction on the melting of gold coin for non-monetary uses or for export to foreign countries. If this requirement is adhered to, the upper and lower limits of the price of gold will be identical and the price of the metal will then be absolutely fixed. The reason for this is that no one will give more for gold than can be obtained by melting

gold coin. To refer to the previous illustration, if \$20 in gold coin can be turned into an ounce of gold bullion by melting, naturally no one will be inclined to give more than \$20 per ounce for gold in the market. There may be a slight discrepancy since the melting of the coin contains an element of expense, but it will not be great.

Needless to say, if moneys other than gold coin are in use, they must be freely redeemable in gold coin if the value of all of the moneys of the system are to be kept equal to the value of a specified weight of gold. If this is done, however, the value of the gold in the money unit and the value of the moneys of the system will be identical and a full gold coin standard will be maintained.

The gold bullion standard. — As noted in an earlier paragraph, after the Great War a number of countries did not reopen their mints to the free coinage of gold upon returning to the gold standard. Instead they provided that their central banks should buy gold bullion or bars with central bank notes and should redeem these notes on demand in gold bars of specified weight. Thus Bank of England notes, in the period 1925–1931, were redeemable in gold bars of 400 ounces. It was accordingly possible to obtain gold in exchange for money at a fixed price, although it was not possible to redeem small notes of £1 and 5s. denominations in gold. Since, when gold is needed for use in the arts or for export, it is wanted in substantial amounts, the limitation of the redemption privilege to 400 ounce bars does not serve to bring about a divergence between the official and the market selling prices of gold.

So long, then, as a country will exchange some kind of money for gold bullion at a fixed price and in turn redeem this money in gold bars at the same price, there can be no divergence between the value of the moneys of the system and the value of the gold in the money unit. Clearly the result is the same as under a gold coin standard except that gold coin does not circulate within the country. At times, as in England before 1931, and, at present, in the United States, the official buying price of gold is slightly less than the official selling price. In such circumstances, there may be a slight variation in the market price of gold, but if it is

rigidly held within narrow limits, the country is still said to maintain a gold standard.

The gold exchange standard.—A third variation of the gold standard is known as the gold exchange standard. Under a full gold exchange standard, the moneys of the country are not redeemed in gold coin or bullion, but in drafts payable in gold in some foreign gold standard country. As a result, although gold can be exchanged for the money of the country at a fixed price, it is impossible to turn the money into gold on the spot except by the payment of a premium equal to the cost of shipping gold from the foreign gold standard country to the country on the gold exchange standard.

The price of gold in a gold exchange standard country may vary, therefore, by an amount equal to the cost of importing the gold. Nevertheless, these limits are rigidly fixed and relatively narrow, so that it is really the value of a given weight of gold which fixes the value of the moneys of the country.

Following the Great War, a partial gold exchange standard system was adopted by a fairly large number of countries. These countries, however, maintained only a part of their reserves in the form of foreign exchange, the remainder being in gold. In such instances, if gold was wanted for use in the arts it could be obtained at a fixed price for that purpose. On the other hand, if the gold was needed for export, the central bank had the option of redeeming its notes in a draft payable in gold in a foreign center. Under this arrangement, the value of the gold in the money unit fixed the value of the other moneys as closely as in a gold coin or gold bullion standard country.

The silver standard.—Theoretically, the considerations applying to the gold standard would apply equally well to the silver standard. That is, there might be silver coin standards, silver bullion standards and silver exchange standards resting on the same bases as their corresponding gold counterparts. In practice, however, there has been no silver standard country since China departed from that standard in 1935, and the question of the silver standard is hence one of mere theoretical interest without practical significance.

BIMETALLISM

Requirements of a bimetallic standard.—The bimetallic standard exists in a country when either of two metals, gold and silver, can be freely coined at the mint at a fixed ratio to one another and when coins of either gold or silver are made full legal tender in the payment of debts. It is also essential that no restrictions be placed on the melting or exportation of either gold or silver coins. It is also theoretically possible to have a bimetallic bullion standard, in which case silver certificates would be given for silver bullion and gold certificates for gold bullion at a fixed ratio, the certificates being redeemable in silver or gold bars on demand.

In practice the bimetallic standard, in its long and interesting historical experience, has always been on a coin rather than a bullion basis. In the following discussion of the operation of bimetallism, therefore, the free coinage of gold and silver will be postulated.

Gresham's law.—The monetary principle which applies most widely to the operation of the bimetallic standard is known as Gresham's law and is formulated, in its simplest terms, in the statement "Bad money drives out good." The name "Gresham's law" has resulted from the association of the principle with the statements of Sir Thomas Gresham, financial agent for Queen Elizabeth, who pointed out that the debasement of the coinage by the sovereign, while it would leave in existence two kinds of coins of the same nominal value but of unequal weight, would not result in the concurrent circulation of both kinds of coins, for the heavier coins would be shipped abroad (where they would be accepted only by weight), while the lighter ones alone would remain in domestic circulation.² It must not be thought, however, that Gresham was the first to observe the working of this monetary principle simply because his name has been associated with the law by later writers. Nicole Orêsmé gave a precise and accurate statement of the principle in his

² "It may please your Majesty to understand, that the first occasion of the fall of the exchange did grow by the King's Majesty, your late father, in abasing his coin from vi ounces fine to iii ounces fine. Whereupon the exchange fell from xxvis. viiid. to xiiis. ivd. which was the occasion that all your fine gold was conveyed out of this your realm." Sir Thomas Gresham on the Fall of the Exchanges; Bland, Brown, and Tawney, *English Economic History: Select Documents*, p. 416.

treatise on money in 1364,³ and a recognition of the action of such a law is to be found in Aristophanes' *Frogs*, in the latter part of the fifth century B.C.⁴

Simplest statement of Gresham's law misleading.—The simple statement that "bad money drives out good," which has been termed Gresham's law, is both inaccurate and misleading, as it stands, and needs considerable remodeling. In the first place, in most of the cases to which Gresham's law is applied, bad money does not mean money which is counterfeit or undesirable *per se*, but rather money which has an exchange value in some connections which is less than that of the money which is driven out of circulation. Secondly, if the principle is to work out fully in practice, both the so-called bad and good moneys must be legal tender. Thirdly, the good (i.e., the more valuable) money is not really driven out of circulation, but is rather enticed out by the possibilities of profit in putting it to other than domestic monetary use. Lastly, if the less valuable money is not present in sufficient quantity, it will not cause the more valuable money to disappear from circulation entirely, but will simply displace a part of it, the more valuable money continuing in circulation to some extent, although only at a premium.

Having now noted the more important defects of the simplest statement of Gresham's law, we may formulate the principle in a manner which is less open to objection :

If two moneys of the same nominal value are legal tender in the payment of debts and a discrepancy occurs between their exchange values in any connection, the money with the higher exchange value will commonly disappear from circulation or will circulate, if at all, only at a premium.

The reasoning in support of this principle is simple. Since both moneys are legal tender, one is as good as the other in the payment of money obligations. It follows that if one of the moneys comes to have a higher exchange value in some other connection than it has as domestic money, it

³ "That if the fixed legal ratio of the coins differs from the market value of the metals, the coin which is underrated entirely disappears from circulation, and the coin which is overrated alone remains current." *Tractatus de origine, natura, jure, et mutationibus monetarum* (Paris). See Wolowski's edition (Paris, 1864). Quoted from Laughlin, *The Principles of Money*, p. 420.

⁴ *Ibid.*, Laughlin, p. 420.

will be profitable to use this money in the connection in which it will bring the greatest return. Hence it will tend to disappear from circulation, since the cheaper money, being legal tender, is equally qualified to make all domestic payments. If, however, the less valuable money is not available in sufficient quantities to perform the money work of the country, the money which has the greater exchange value in some other connection may continue to appear in circulation as money, but it will circulate only at a premium which is sufficiently high to keep it from being put to other uses.

Gresham's law and the bimetallic standard.—It is a well-known fact in history that countries operating under a bimetallic standard have frequently experienced difficulty in keeping both silver and gold coins concurrently in circulation. If the fixed ratio at which the metals were accepted for coinage at the mint (the mint ratio) diverged to any significant extent from the market ratio between the two metals, one or the other of the metals would become of more value as bullion than as money and would disappear from circulation. To illustrate, suppose that the mint puts 15 times as much by weight of silver into a silver dollar as it puts gold into a gold dollar, so that the mint ratio of gold to silver is 1:15, but that on the market for bullion one ounce of gold will exchange for 16 ounces of silver, so that the market ratio between the two metals is 1:16. Under such conditions, the mint over-rates silver in relation to gold (i.e., treats silver as worth more than it really is on the market) and it becomes profitable to use the gold for other than domestic monetary purposes, with the result that the latter metal tends to disappear from circulation. The conditions depicted above were those which actually existed in the United States following the year 1810, and the precise method by which gold was withdrawn from circulation at that time has been so clearly depicted by Professor Laughlin that we shall quote the following paragraph from his writings:⁵

"The operation of Gresham's law is in reality a very simple matter. If farmers found that in the same village eggs were purchased at a higher price in one of two shops than in the other, it would not be long

⁵ *The History of Bimetallism in the United States*, pp. 26-28.

before they all carried their baskets to the first shop. Likewise, in regard to gold or silver, the possessor of either metal has two places where he can dispose of it—the United States Mint, and the bullion market; he can either have it coined and receive in new coins the legal equivalent for it, or sell it as a commodity at a given price per ounce. If he finds that silver in the form of United States coins buys more gold than he could purchase with the same amount of silver in the bullion market, he sends his silver to the Mint rather than to the bullion market.” Laughlin then states that, by 1810, “the market value of silver relatively to gold had fallen to 1:16, while at the Mint the ratio was 1:15. That is, in the market it required sixteen ounces of silver to buy one ounce of gold bullion; but at the Mint the Government received fifteen ounces of silver and coined it into silver coins which were legally equivalent to one ounce of gold. The possessor of silver thus found an inducement of one ounce of silver to sell his silver to the Mint for coins, rather than in the market for bullion. But as yet the possessor of silver had only got silver coins from the Mint. How was he to realize his gain? Will people give the more valuable gold for his less valuable silver coins? To some minds there is a difficulty in understanding how a cheaper dollar is actually exchanged for a dearer dollar. This also is simple. The mass of people do not follow the market values of gold and silver bullion, nor calculate arithmetically when a profit can be made by buying up this or that coin. The general public know little about such things, and if they did, a little arithmetic would deter them. These matters are relegated by common consent to the money-brokers, a class of men who, above all others, know the value of a small fraction and the gain to be derived from it. Ordinary persons hand out gold or silver, when they are in concurrent circulation, under the supposition that the intrinsic value of gold is just equal to the intrinsic value of silver in the coins, according to the legal ratio expressed in the coins. If, under such conditions, silver falls as above described, the money-broker will continue to present silver bullion at the Mint, and the silver coins he receives he can exchange for gold coins as long as gold coins remain in common circulation—that is, as long as gold coins are not withdrawn by every one from circulation. Having now received an ounce of gold in coin for his fifteen ounces of silver coin, he can at once sell the gold as bullion (most probably melting it, or selling it to exporters) for sixteen ounces of silver bullion. He retains one ounce of silver as profit, and with the remaining fifteen ounces of silver goes to the Mint for more silver coins, exchanges these for more gold coins, sells the gold as bullion again for silver, and continues this round until gold coins have disappeared from circulation. When every one begins to find out that a gold eagle will buy more of silver bullion than it will of silver dollars in current exchanges, then the gold eagle will be converted into bullion and cease to pass from hand to hand as coin. The existence of a profit in selling gold coins as bullion, and presenting silver to be coined at the Mint, is due to the divergence of the market from the legal ratio, and no power of the Government can prevent one metal from going out of circulation.

Like the farmers with their eggs, under the operation of Gresham's law silver will be taken where it is of the most value (the United States Mint), and gold will be sold where it brings a greater value than as coin (the bullion market)."

Illustrations of the operation of Gresham's law.—That the monetary experience of the United States furnishes one example of the operation of Gresham's law under a system of bimetallism is evident from the foregoing quotation. Since we shall trace the monetary development of this country in the following chapter, however, the particular case of the United States is merely mentioned in the present connection. Among other nations, the experience of France under the bimetallic standard is a case in point. France adopted the bimetallic system in 1803, with a mint ratio of 1:15½. At the time of the adoption of this system, the ratio mentioned seems to have come close to coinciding with that which obtained in the market. Very shortly, however, the value of silver began to fall relatively to gold, with the result that the mint ratio, before very long, overrated silver, and gold largely disappeared from circulation. The situation again changed about the middle of the century. The tremendous increase in gold production at that time lowered the value of gold relatively to silver and, the mint ratio of 1:15½ being retained, gold came to be over-rated at the mint and silver coin (including subsidiary silver) began to disappear from active circulation.

In 1865, France joined with Belgium, Switzerland, and Italy to form the Latin Monetary Union, under the terms of which uniform coinage laws were adopted by the contracting nations. The fineness of subsidiary silver coins was reduced from .900 to .835, in order to prevent their disappearance from circulation, but free and unlimited coinage of both gold and silver in the larger denominations at a ratio of 1:15½ was adopted by the members of the Union. This ratio at first over-rated gold, so that the practical result of the system was a single gold circulation, although legally the free coinage of both metals was permitted. Shortly after 1870, however, the situation changed for a third time. Silver fell in value relatively to gold and the mint ratio of 1:15½ came to over-rate silver. The action of Gresham's law

would shortly have resulted in the disappearance of gold from circulation, had not the members of the Latin Monetary Union prevented this from occurring by first limiting, and finally (in 1878) discontinuing entirely, the coinage of silver in the larger denominations.

"The most extreme instance [of the action of Gresham's law under bimetallism] which has ever occurred," according to Mr. Jevons,⁶ "was in the case of the Japanese currency. At the time of the treaty of 1858, between Great Britain, the United States, and Japan, which partially opened up the last country to European traders, a very curious system of currency existed in Japan. The most valuable Japanese coin was the kobang, consisting of a thin oval disc of gold about 2 inches long, and $1\frac{1}{4}$ inches wide, weighing 200 grains, and ornamented in a very primitive manner. It was passing current in the towns of Japan for four silver itzebus, but was worth in English money about 18s. 5d., whereas the silver itzebu was equal only to about 1s. 4d. Thus the Japanese were estimating their gold money at only about one-third of its value, as estimated according to the relative values of the metals in other parts of the world. The earliest European traders enjoyed a rare opportunity for making profit. By buying up the kobangs at the native rating they trebled their money, until the natives, perceiving what was being done, withdrew from circulation the remainder of the gold."

International bimetallism. — It is thus clear that, historically, the bimetallic standard has not proved satisfactory. It has, in practice, resulted in alternating periods of silver and gold monometallism, without the advantages of either. It should be noted, however, that there is one set of circumstances in which bimetallism would work. If all of the leading countries of the world adopted this standard and all maintained the same mint ratio, the mint prices of gold and silver throughout the world would fix the market prices of the two metals and no divergence between the mint and market ratio would be possible. The great difficulty is, of course, to obtain any general international agreement to

⁶ *Money and the Mechanism of Exchange*, p. 84. Also quoted in Laughlin, *The Principles of Money*, p. 423.

adopt the standard and maintain uniform mint ratios throughout the world.

Symmetallism. — A variation of the traditional bimetallic standard is what is known as symmetallism. A country would be on a symmetallistic standard if its money were redeemable in gold and silver in specified proportions. Such a system differs from bimetallism in that the standard of value would be gold *and* silver instead of gold *or* silver. If standard coins were minted, they would contain both gold and silver alloyed in a certain definite proportion. If not, the moneys of the country would be redeemable in so much gold plus so much silver in the designated proportion. A legally authorized symmetallistic standard has never been tried in modern times, but suggests a possible substitute for the monometallic or bimetallic standards.⁷

MANAGED STANDARDS

The paper standard. — In the past, when a country which had been on a metallic standard issued paper money with full legal tender powers and refused to redeem this money in the standard metal (or metals) as formerly, it was said to be on a paper standard since the paper money issued by the government was irredeemable in any metal or other good of any description. Under the conditions usually surrounding the issuance of irredeemable paper money, the value of the money unit fluctuates (usually depreciates) so rapidly that the paper standard can scarcely be considered as a *standard* of value at all. A number of authorities in recent years, however, have become strong advocates of paper standards under which the amount of money is carefully controlled. A variety of plans have been proposed, but, as they all have more or less the same end in view, they may be considered together under the head of the commodity standard.

The commodity standard. — The system employing the commodity standard would aspire to maintain the moneys of the system at an equality of value, not with some single commodity, but with a whole bill of commodities. The

⁷ Alfred Marshall suggested resort to symmetallism (which he termed the true bimetallism) in his testimony before the Gold and Silver Commission in 1887-1888. See *Official Papers by Alfred Marshall*, pp. 27 ff. The electrum coins used in ancient times were, of course, symmetallistic. Burns, *op. cit.*, p. 139.

standard of value would then be the value attaching to eggs plus milk plus wheat plus corn plus potatoes plus other designated goods in certain specified proportions. As it would be obviously impossible to redeem the moneys of the system at any time in the goods themselves, the value of the money would have to be kept equal to that of the bill of goods by so regulating the *quantity* of money that a given unit would always purchase the same total value of such goods as were employed in the designation of the standard. Among the advocates of this type of standard there is little agreement as to the number and character of the commodities to be employed as well as to the exact means for securing equality between the value of the group of commodities and the moneys of the system. These matters cannot be discussed intelligently, however, until the principles governing the value of money have been considered at a later point.

The compensated gold standard.—A hybrid standard, fundamentally of the commodity type, but clothed in some of the less important habiliments of the gold standard, is what may be termed a compensated gold standard. Under this system, the moneys of the country would be redeemable in gold, but the weight of gold in the money unit would vary with variations in the value of a bill of goods. Thus, if the average or total value of the bill of goods should rise by, say, 5 per cent, the weight of gold in the money unit would be increased by the same percentage, and vice versa. The alleged advantage of this type of standard over the straight commodity standard is that the people of the country would enjoy the certainty of being able to redeem their paper money in gold bars, although the amount of gold that could be obtained from a given quantity of money at any time in the future would, of course, be problematical.

THE MULTIPLE COMMODITY RESERVE STANDARD

Nature of the proposal.—A plan for a different type of standard than any of the preceding has recently been proposed and has gained considerable support. The plan, very briefly, is to have the Treasury or central bank issue money certificates against the deposit of warehouse receipts for staple products stored in accredited warehouses. The products so

stored would consist of those staples which are dealt in on organized commodity exchanges. In order to obtain money certificates, warehouse receipts for all the products in the list would have to be presented in specified proportions, the proportions to be determined by the trend of the relative amounts of the products consumed in a normal period of years, or by some similar method. The money certificates would be redeemable at any time in warehouse receipts for the stored products in the proportions specified.

This multiple commodity reserve plan, as it is termed by its adherents,⁸ reminds one of the colonial Virginia tobacco certificates amplified to include a substantial number of commodities instead of one. It is felt that the greater number of commodities behind the money certificates would lead to a more stable monetary unit than one backed by any single commodity, whether gold or something else. The theory of the proposal is appealing, but many practical difficulties would have to be surmounted before such a plan could be put into operation. It is mentioned here as a proposal which might be attempted at some time in the future, but which does not seem practicable at present.

Having described the characteristics and requirements of the chief types of standards which have been used in the past or proposed for the future, attention must next be directed to certain other aspects of the monetary system.

THE DENOMINATION SYSTEM

The need for a system of denominations.—In order to overcome that difficulty of barter which arises out of the indivisibility of the larger and more valuable goods to be exchanged, it is essential that money be divisible. Of course, the difficulty could be solved by having money of one denomination only which would be equal in value to the smallest article a person would be likely to wish to buy, but such a plan would require the use of a tremendous number of units of money and would be highly inconvenient in making large purchases. Try to imagine the disutility of having to pay, or receive payment, for a house and lot in cents only,

⁸ The plan is being sponsored by the Committee for Economic Stability, New York City, and is elaborated in *Storage and Stability* by Benjamin Graham.

and the inexpediency of such a simple system becomes obvious. It is for the purpose of preventing such an unhandy situation, while still permitting small payments to be made conveniently, that a denomination system must be established.

The monetary unit.—The basis of the denomination system is the monetary unit. This is the primary denomination—"that denomination which is thought of as *fundamental* in the system, the other denominations being referred to it in defining their value."⁹ In a gold standard country, the value of the primary unit is fixed by law as a certain weight of gold of a specified fineness, which is given a definite name. The monetary unit of the United States, for example, is called a dollar ; of France, a franc ; of England, a pound ; and of Germany, a mark. Since the monetary unit is a unit of value, it is really the value of the specified weight of gold, rather than the gold itself, which constitutes the unit. It is more convenient, however, to refer to a given unit of value as so many grains (or grams) of gold, and no harm is done so long as the real meaning is understood.

There is no *necessary* connection between the name of the monetary unit and its gold value at different times. The name of the unit is usually retained even though its gold value has been changed as a result of legislation altering the gold content of the unit or because of a temporary resort to the so-called paper standard in time of emergency. Following the Great War, for example, when Germany was not redeeming her paper money in gold, the gold value of the mark, as measured in the money of the United States, reached a point below 0.000000000025 cent,¹⁰ although it had been worth 23.82 cents before the War. After 1923, through a process of virtual repudiation, the gold value of the mark was restored to its pre-war figure.

Other denominations.—The precise value of the monetary unit (providing it is left unchanged) is a matter of indifference so long as various multiples and fractions of this unit are made available for the convenience of the public in

⁹ Taylor, *op. cit.*, p. 35.

¹⁰ *Foreign Exchange Quotations and Curves*, Commission of Gold and Silver Inquiry, United States Senate, graph 9 (Washington 1924).

making payments of varying sizes. The fractional denominations are necessary for making change and for purchasing cheap commodities, so that this type of money is used almost entirely in hand-to-hand circulation. The monetary unit and, perhaps, its smaller multiples (depending upon the value of the unit) are used both in circulation and in the reserves of the banks, while a predominant proportion of the larger multiples of the monetary unit is retained in the reserves of financial institutions, since they are too large to be of use for ordinary circulation purposes.

In deciding the specific denominations to be used, other than the monetary unit itself, the majority of modern nations have favored what is known as the decimal system in which the fractional denominations are designated as so many tenths or hundredths of the monetary unit, while the larger denominations are in multiples of ten or fractions of such multiples. Thus, in France, 100 centimes equal one franc and, before the War, coins of 20 centimes, 50 centimes, and 1, 2, 5, 10, 20, 50, and 100 francs were provided for. The advantage of the decimal system lies in the ease of calculation and bookkeeping on a decimal basis, as contrasted with the non-decimal denomination system of England where 4 farthings equal 1 penny, 12 pence equal 1 shilling, 20 shillings equal 1 pound, and 21 shillings equal 1 guinea.

LEGAL TENDER

The nature of legal tender. — In addition to legal provisions for a standard value and a denomination system, the monetary laws also specify precisely the legal tender privileges attaching to each of the various denominations and kinds of money which are issued. By legal tender is meant *a right extended by law to certain types of money which makes such moneys valid in the payment of debts, provided that there is no contract or agreement to the contrary*. The refusal of a creditor to accept money with such legal tender powers when tendered to him in the exact amount of the debt relieves the debtor of all obligations to pay interest from the date on which payment was tendered. Such refusal, however, does not cancel the debt itself, but prevents the creditor from obtaining damages from the debtor for non-payment.

The purpose of legal tender provisions is simply to enable the courts to determine, in disputed cases, whether or not a satisfactory offer of payment has been made in an unqualified money contract. This does not mean that legal tender is invariably, or even frequently, used in the payment of debts, for some other type of money may be more convenient to both creditor and debtor. Nevertheless, when there are several different types of money in use, and when most contracts call for payment in money without specifying any particular kind of money, it is almost inevitable that the law should designate the kind (or kinds) of money which shall be deemed legally satisfactory in the fulfillment of such obligations.

In the broadest sense, legal tender applies to all debts, public and private, and such full legal tender powers are usually conferred only upon standard coin, or such government or central bank notes as are secured by a substantial percentage of standard coin or bullion. Legal tender powers which are limited to specified payments or amounts are also, at times, bestowed upon some other types of money.

The granting of legal tender powers tends to make money more acceptable than it might otherwise be, for it gives the recipient the power to use such money, once he has received it, in the discharge of any or all of his obligations. In the case of gold coin this is not of great importance, since such money embodies the standard of value itself, but if some less valuable money which is not redeemable in gold is made full legal tender, it has a tendency to stay in circulation when it would not otherwise do so and will therefore tend to displace the full-bodied money.

COINAGE

Coins and mints.—Before proceeding with a discussion of the different kinds of money ordinarily in use, it will be well to consider the nature of the machinery by means of which these moneys are brought into being. In the case of metallic money, the laws of the country typically provide for the manufacture of coins by the government. A coin is *a piece of metal of specified weight and fineness, stamped with some particular design, and made with a view to its use as money.*

Although coins of a given type always contain a specific amount of metal, they are regarded not as so much metal, but as so much money. Formerly, for example, a person receiving a ten-dollar gold piece did not give a thought to the fact that he was getting 232.2 grains of gold, his interest being in the coin as a piece of money and not as a certain weight of metal. This is as it should be, for it would be a great inconvenience to have to weigh metal each time it changed hands as a medium of exchange, but in order to make such weighing unnecessary, it is imperative that all coins of a given kind be alike. The necessity for coins which are uniform in weight and fineness and which are easily recognized as money has led to the coinage of metallic money exclusively by the government in all advanced countries, and the monetary laws of these nations provide for the establishment and operation of mints for this purpose.

Coinage terms and practices. — It is not intended, in a work of this sort, to enter into any discussion of the history or the technique of coinage. A few terms frequently used in connection with the coinage of money should be explained, however, as well as some of the principles and practices which are commonly followed.

Coins are not ordinarily made from the pure metal, but are alloyed with some other metal or metals in order to give them greater strength and general durability for circulation purposes. There need be no fixed ratio of pure metal to alloy in every case in order to manufacture a satisfactory coin, and the ratio actually used is likely to be the result of long-standing custom, international agreement, or mere chance. The gold coins formerly minted in the United States contained 900 parts of pure gold and 100 parts of alloy, and are consequently said to be $\frac{9}{10}$ ths fine, while the gold coins of England contained 916.67 parts of pure gold out of 1000 and were hence $1\frac{1}{2}$ ths fine. The difference in the fineness of the United States and the English gold coins was consequently relatively slight and either type of coin is perfectly satisfactory from the standpoint of technique. The majority of commercial nations, nevertheless, adopted coins of a fineness of $\frac{9}{10}$ ths, and this particular ratio was to be recommended on the grounds of international uniformity.

The same fineness that is used in the making of the gold coins may or may not be adopted for fractional coins. These are ordinarily made from silver, or one of the baser metals, and are not used in international payments, so that the exact degree of fineness is a matter of no great moment. Subsidiary coins, for reasons to be discussed later in the chapter, are made short in weight (i.e., they have a greater value as money than as metal), and this may be accomplished by (1) decreasing the fineness of these coins, or (2) using the same fineness as in the gold coins and decreasing the amount of metal used in their manufacture. The former method was adopted by France in 1865, when the fineness of the silver subsidiary coins was reduced from .900 to .835, and the latter by the United States in 1853, when the weight of the fractional silver coins was decreased although the old fineness of .900 was retained.

When a country adopts a given metal as a standard of value and coins that metal, the coinage of it is always free and usually gratuitous. The distinction between these two terms is as follows: A country is said to have *free coinage* if anyone is allowed to bring the standard metal to the mint and have it turned into coin at a cost not greater than the cost of minting. If the cost of minting is passed on to those bringing the metal to the mint, the coinage — though free — is not gratuitous. If, however, the mint absorbs the cost of coining the metal, the coinage is free and *gratuitous* as well. It should be clearly understood that the levying of a small charge to cover the actual cost of minting does not interfere with the freedom of the coinage, so long as anyone having bullion may take it to the mint, pay the minting charges, and receive the coined metal in return.

The aforementioned charge, which just covers the cost of minting the coin, is known as *brassage*. At times, as in the case of subsidiary coins, the government may put into the coins a smaller value of metal than the face value of the coins. When this is done, the government buys the metal used and has the coins minted from it. Such procedure is known as *coinage for government account* or *limited coinage*, as contrasted with the free coinage already mentioned. When the government pays out such short weight coins it

receives a profit resulting from the short value of the metal in them. This profit is called *seigniorage*, and represents the difference between the metallic value of the coins and their face or money value less brassage.¹¹ Since the total of such coins forms but a small percentage of the total amount of money used in a modern country, the revenue to the state from this source is not great.

Another practice which is of importance when a country is on a gold coin standard consists of fixing *limits of tolerance*. There are two types of tolerance. The first consists of a small percentage of error allowed in the striking of coins at the mint. The second is an allowance for abrasion of the gold coins in circulation.

The first of these types of tolerance is necessary because it is impossible to obtain absolute accuracy in minting coins. Tolerance as an allowance for abrasion, on the other hand, is a device for preventing deterioration of the gold coinage. Acceptance of all gold coins at their face value by the banks and the government tends to encourage the clipping and sweating of these coins.¹² If coins are received by weight only, however, people tend to sort out the heavy, new coins in making payments to the government and banks, and the rest of the gold circulation tends to deteriorate progressively. By allowing a slight loss of weight from abrasion, while yet accepting gold coins below this limit by weight only, the sorting out of absolutely new coins may be prevented and the coinage may be maintained in a satisfactory state.

In the actual minting of the coins, certain rules should be observed. First, the coins should be of a proper size. Jevons mentions certain eighteenth century coins in Sweden which were $7\frac{1}{2}$ inches square and weighed $3\frac{1}{2}$ pounds. These were obviously of such unwieldy proportions as to make them absurd. On the other hand, the United States discontinued the coinage of the gold dollar in 1890, because it was so small as to be highly inconvenient. Second, in

¹¹ Strictly speaking this is *net* seigniorage. The unqualified term is more commonly, yet somewhat less accurately, used to denote gross seigniorage — i.e., the entire difference between the metallic and face values of the coin.

¹² An historical example of this is to be found in the English experience under William III. In spite of drastic penalties, the coins of the day were regularly clipped and sweated until the government refused to receive them in payments except by weight.

addition to convenience of size, coins should be made in such a fashion as to discourage clipping and counterfeiting. Clipping is prevented by milling the edges of the coins or by the inscription of a legend along their edges. The milled edge, together with an intricate design, also helps to prevent counterfeiting by making imitation of the coins difficult to accomplish. Lastly, the coins should be stamped with a design, easily recognized and as attractive as possible.

The manufacture of paper money.—Although distinct from the question of coinage, the manufacture of paper money may be given brief mention. It is desirable that the engraving and printing of paper money be left in the hands of the government. This is the case in the United States, for example, where the Bureau of Engraving and Printing at Washington manufactures all the hand-to-hand paper money that is used in the United States, including the notes of the issuing banks. The advantage in this lies in the fact that uniformity in size and design is possible of attainment, as well as sufficient intricacy of design to make counterfeiting difficult. A special type of paper is also used in the United States which helps to prevent imitation. The most recent paper money "Series of 1928," which is now in circulation, is made of uniform design for all notes of a given denomination, whereas former series have had different designs for each different type of note. This makes for more ready recognition of each denomination of paper money by all classes of people and thus increases the difficulty of counterfeiting such money.¹³

KINDS OF MONEY

Full-bodied and credit money.—The moneys which are found in the typical monetary system may naturally be divided into two fundamental groups. They are (*a*) full-bodied money, and (*b*) credit money. Money is full-bodied when its value as a commodity is as great as its value as money. That is, a full-bodied coin must contain enough metal so that its bullion and money values are the same.

¹³ *The Commercial & Financial Chronicle*, June 1, 1929, p. 3618, contains a description of this currency. The notes are made one-third smaller in size than the old notes in order to reduce expense.

Prior to the outbreak of the Great War, practically all of the gold standard countries provided for the minting of full-bodied gold coins and, since these coins actually embodied the standard of value, they were called standard money, a terminology which still exists. Such a use of the term standard money is perfectly correct, but its use has long been extended to include some other types of money which are not full-bodied. As a matter of fact, at the present time, so far as the author is aware, full-bodied money is not in use in any advanced country. Yet the term standard money is still used and represents the money of final redemption. Thus in England, notes of the Bank of England would be considered standard money since they cannot be redeemed in any other form of money. This was the case even before 1931, when Bank of England notes were redeemable not in any other form of money, but in gold bullion. In the days prior to the Great War, when the standard of value was embodied in some of the coins of every gold standard country, the term "standard money" would have referred only to money containing the standard of value. At present, however, with no such money in circulation, the term "standard money" may best be applied to the money of final redemption. It is necessary, nevertheless, not to confuse standard money, as thus defined, with full-bodied money as described above.

When standard money is conceived as full-bodied money, its functions are naturally the same as those attributed to the standard of value. It fixes the value of the other moneys and, in so doing, becomes the basic money of the system. It also serves, in gold standard countries, as a means of foreign payment. It derives these functions from its gold content, however, and not from its coined form. The latter does, of course, make it useful as a domestic medium of exchange, but this function is by no means distinctive of standard money alone. Standard money is always made full legal tender and this is sometimes, though not always, a distinctive feature of such money.

Representative money.—Before going on to a discussion of the second main type of money (credit money), it is necessary to mention one type of money which is neither

full-bodied nor credit, and this we shall call representative money. If gold coin or bullion, when taken to the Treasury of a country, may be exchanged for an equal amount of gold certificates, the latter become merely warehouse receipts for so much deposited gold, and the recipient no more becomes the creditor of the government than he would become the creditor of the warehouseman with whom he had stored cotton and from whom he had obtained a receipt therefor. Such money is representative money in the fullest sense, since it represents actual money or gold that has been deposited. If a country issues such gold certificates in exchange for deposited coin or bullion, they should be included as standard money. Their use simply forms one way of circulating gold as contrasted with its circulation in the form of coin.

On the other hand, if similar certificates are issued against some form of credit money, they should be considered as part of the country's stock of that credit money against which they are issued. It is only proper, therefore, to class representative money as standard when it is issued against deposits of standard coin or bullion. As a matter of fact, in drawing fundamental distinctions between the different kinds of money in the system, certificates of the sort described may be left out.

Credit money.—We shall consider as credit money any sort of instrument which is widely used as a medium of exchange and which, when so used, permits an economy in the need for full-bodied money or bullion. Such money may originate with the government or with the central or individual banks of the system. The types of credit money for which the banks are responsible will be discussed later. For the present, we shall confine our attention to the various possible kinds of government credit money.

Government credit money may be either paper or metallic. If the government issues formal promises to pay standard money to the bearer on demand in the form of paper notes, the recipient of such notes becomes the creditor of the government. As long as the holders of such notes are confident that the government will convert them into standard coin or bullion upon demand, very few will be presented for re-

demption, and the government may—if it so desires—effect a considerable saving in the amount of standard money which it must keep on hand for redemption purposes, a reserve of 50 per cent of the outstanding notes being ample to maintain convertibility upon all except the most extraordinary occasions. Such government notes may be given substantial, if not complete, legal tender powers and, in almost all domestic transactions, they then become a substitute for standard money, and are used partly to form bank reserves (for the redemption of bank credit money) and partly in general circulation. Thus they resemble gold certificates, but differ from the latter in that a saving in gold may be effected by their use, while no such saving is possible with the use of the representative certificates.

Metallic coins which are, in effect, credit money may also be issued by the government. If a country which is upon a gold standard, for example, puts into circulation silver coins the metallic content of which is worth less than the face money value (as measured in standard money), and then keeps these coins at par with the standard money by making them convertible into it, such coins are credit money even if the promise to convert them into standard money is not specifically stated upon their face. And, if the government confers upon these coins practically complete legal tender powers, they become nothing more than silver notes which differ from the paper notes we have described only in the cost of the substance from which they are made. Neither the paper nor the silver is worth as much, *per se*, as the money into which it is made, their value as money being maintained by the possibility of converting them, directly or indirectly, into standard money when desired. This, as we shall see later, is the case with the silver dollars issued by the United States government. The recipient of such money becomes the creditor of the government. He does not receive full value in the form of silver when he accepts these coins and must depend upon the government to keep their value equal to that of standard money, and a saving in gold is clearly possible, and existent, when such short-weight silver coins are issued. As in the case of gold certificates, if silver certificates are issued against deposits of short-weight

silver coins, they may be considered as one way of circulating the silver and hence identical with the type of money they represent.

Subsidiary money. — Metallic credit money is also issued by the government in the form of *subsidiary money*. Such money is for the purpose of making change and is consequently coined in small (fractional) denominations. Aside from this, subsidiary money has other special characteristics. (1) It is made *short in weight*, so that it is worth more as money than as metal and will not be melted down. (2) The *amount* of subsidiary money is *limited* to the needs of business, and such money is therefore coined on government account. If everyone were permitted to take the metal from which subsidiary coins are made to the mint and receive in exchange the corresponding coins with a monetary value much in excess of the value of the metal they contain, the operation would be so profitable that the country would soon be flooded with subsidiary coins and their value would depreciate. To avoid this the government buys the necessary metal and coins only a sufficient number to satisfy the needs of trade. (3) Subsidiary coins are made of some metal which is *less valuable* than that contained in the standard money, as a general rule. Otherwise, either the fractional coins would have to be so small as to be practically useless, or the standard coins so large as to be very cumbersome. (4) Since large amounts of fractional coin are a nuisance when received in payment, the law usually *limits the legal tender* power of such coins to payments of relatively small size. (5) Lastly, subsidiary coins are usually made directly convertible into standard money. This is not absolutely essential, as such coins may be kept at par by a judicious limitation of their amount, but the convertibility feature gives an added insurance against their depreciation.

Subsidiary coins are usually made out of silver, although the very small denominations are ordinarily made from nickel, copper, or bronze in order to permit coins of usable size. The latter are called *minor coins* to distinguish them from their more valuable silver associates, but have similar characteristics. Although fractional paper money has been issued at times in the past, this is not considered a desirable

practice because of the tremendous wear and tear to which such money is subjected, and today a metallic fractional currency is used by all countries under normal conditions. Subsidiary money is to be classed as credit money for the same reasons that led us to include the larger denomination short-weight coins previously described in that category.

A classification of money.—In concluding this survey of the different kinds of money which are issued by the government, it will, perhaps, make for clarity if we attempt a classification of these moneys in the form of a compact table. Although the two kinds of credit money for which the banks are responsible (bank notes and the check currency) have not yet received attention, we shall anticipate a bit and include them in the classification for the sake of completeness. Regarding representative money as synonymous with the metallic coin which it represents, the table may be drawn up as follows :

- I. Full-bodied money
 - A. Full-weight coin embodying the standard of value
- II. Credit money
 - A. Government credit money
 - 1. Paper promises to pay on demand
 - a. Full-weight standard coin
 - b. Bullion (the standard of value)
 - c. Claims to coin or bullion in foreign countries
 - 2. Short-weight metallic money
 - a. Unit and larger denominations
 - b. Subsidiary (fractional) money
 - 3. Irredeemable paper money
 - B. Bank credit money
 - 1. Bank notes
 - 2. Check currency

No attempt has been made to indicate the legal tender powers of the different kinds of money for the reason that the bestowal of these powers is in the hands of the law-makers and hence no uniform policy can be said to exist. Full-bodied money, when coined by the government, is practically always given full legal tender powers, as are the larger denominations of government credit money, while the check currency is never granted such powers, as a normal thing. The other classes of credit money, however, may

be granted full, partial, or no valid tender privileges, depending upon the decision of the law-making body.

Standard money, *per se*, is also omitted from the classification, since, as already noted, such money may be either full-bodied or credit, depending upon the type of monetary system in use, and hence does not fall naturally, in every instance, into one of the two fundamental groups.

REFERENCES

- Helfferich, K. *Money*, Chapter V.
 Knapp, G. F. *The State Theory of Money*.
 Robertson, D. H. *Money*, Chapter III.
 Taylor, F. M. *Some Chapters on Money*, Chapter II.
 Young, J. P. *European Currency and Finance*. Washington. 1925.
Monetary Systems of the Principal Countries of the World. Washington
 (Office of the Director of the Mint). 1916.
Legislation on Gold. Geneva (League of Nations). 1930.

CHAPTER III

MONETARY DEVELOPMENT IN THE UNITED STATES

1792-1932

Introduction. — The monetary history of the United States contains examples of the operation of many of the monetary standards described in the preceding chapter. The use of specific commodities as money is exemplified in Colonial times. Thereafter, bimetallism, the paper standard and the gold coin standard were in use in three different periods of American monetary development. More recently, even the so-called "commodity dollar" or managed currency type of standard has been the subject of an experiment in the United States, while at present the country maintains a provisional gold bullion standard.

A summary of American monetary development is thus valuable in presenting concrete illustrations of the principles and practices already described and in furnishing as well the basis for a better understanding of present-day problems and policies. The present chapter will be concerned with the development of our monetary system up to 1933, while the following chapter will contain, in somewhat greater detail, an account of the dynamic changes and experiments that have taken place since the spring of that year.

The background of the coinage. — Although the monetary system of the United States really began its existence with the passage of the act of April 2, 1792, the enactment of this piece of legislation was the result of the diverse and unsatisfactory currency conditions existing at the time. It accordingly seems desirable to describe, in brief outline, the situation which prevailed prior to the passage of the act of 1792.¹

¹ The description here given is based on an excellent treatment of the subject in N. Carothers, *Fractional Money*, Chapters III-V.

Colonial currency.—In the English colonies the shilling was universally adopted as the monetary unit. While this was to be expected, because of the familiarity of the colonists with the money of the Mother Country, there was no uniformity in the values of the shilling units of the various colonies. As a matter of fact, there was very little English coin in use. Many of the colonies had attempted to overcome the scarcity of coin by resort to commodity currencies, and staple products such as corn, cattle, wool, tobacco and beaver-skins were used as money in different colonies in this early period. The wampum of the Indians was also in use. What coin there was consisted of a motley variety of foreign issues, the predominant type throughout all the colonies being the Spanish dollar and its fractions.

The colonial shillings, in the circumstances just described, represented merely the valuations placed by the colonies on the various commodities and coins upon which they had conferred legal tender powers, and these ratings of the circulating media in shillings and pence were fluctuating and diverse. "This practice," says Carothers, "is the outstanding feature in the history of colonial currency. It influenced the currency development of the United States long after the achievement of independence."²

An emission of Treasury bills by Massachusetts in 1690 set the example for similar issues of government paper money by the other colonies. In some of the colonies these issues of paper money were excessive, and depreciation and repudiation resulted. The issues of other colonies were more moderate and, consequently, more satisfactory. Even where the paper currency was issued to excess, metallic money reappeared in circulation with each repudiation of government notes, and none of the colonies was for long without some metallic circulation. Nevertheless, government paper was the most important form of money in the colonies until, by the acts of 1751 and 1764, the English Parliament suppressed the issue of legal tender paper by the colonies.

Money during and after the Revolution.—With the advent of the Revolutionary War paper money again assumed

² *Ibid.*, p. 20.

a place of first importance by reason of the issuance of paper currency by the Continental Congress, in addition to state issues, some of which were independent and some guaranteed by the Continental Congress. The issues were excessive and led to depreciation and eventual collapse. The direct issues of the Continental Congress were significant, however, in that the notes purported to be payable in "Spanish milled dollars or the value thereof in gold and silver."³ This signified the adoption of the dollar as a standard unit in place of the shilling, and paved the way for the use of the dollar as the unit of value in the monetary law of April 1792. From this time forth, government accounts were kept in dollars, although the majority of the states continued to rate the circulating medium in shillings and shilling ratings in private transactions continued for many years.

In the issues of the Continental Congress the decimal system was not used. Dollars were divided into ninetieths with fractional denominations of $\frac{1}{9}$, $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{2}$, and $\frac{2}{3}$ of a dollar. Many of the states used other fractional denominations based on the dollar or the shilling with the result that, taking the country as a whole, a remarkable assortment of fractional notes of "1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 pence and $\frac{1}{16}$, $\frac{1}{10}$, $\frac{1}{9}$, $\frac{1}{8}$, $\frac{1}{6}$, $\frac{1}{5}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$ and $\frac{2}{3}$ of the Spanish dollar" was to be found in circulation.⁴

After the termination of the War, a number of the states set up mints and experimented with coinage, and Congress also began to look into the matter of the coinage as early as 1782. A report which had been prepared by Robert Morris in conjunction with Gouverneur Morris was submitted to Congress by the former in that year. While sound and ingenious, the plan advocated by Morris was unduly complex and was replaced by a more understandable proposal by Jefferson which embraced a dollar unit or standard and the decimal system of denominations. On July 6, 1785, Congress formally approved these two features of the plan. On October 16, 1786, the Mint Ordinance was passed by Congress, confirming the coinage proposal already approved,

³ *Ibid.*, p. 37.

⁴ *Ibid.*, p. 40.

providing for mint officials, and legislating in detailed fashion in respect to copper coins.

While a few copper coins were issued under the Mint Ordinance, no great progress was made until after the adoption of the Constitution in 1789. When the Constitution had been finally approved, the House of Representatives, in 1790, directed Alexander Hamilton to prepare a plan for a national mint. The majority of his recommendations, which were based in part on earlier proposals, were finally incorporated in the coinage law of April 2, 1792.

<i>Denom- ination</i>	<i>Name</i>	<i>Metal</i>	<i>Gross Wt. (grains)</i>	<i>Fine Wt. (grains)</i>	<i>Fineness</i>
\$10	Eagle	Gold	270.00	247.50	0.91667
5	Half Eagle	Gold	135.00	123.75	0.91667
2½	Quarter Eagle	Gold	67.50	61.875	0.91667
1	Dollar	Silver	416.00	371.25	0.892
0.50	Half Dollar	Silver	208.00	185.625	0.892
0.25	Quarter Dollar	Silver	104.00	92.8125	0.892
0.10	Disme	Silver	41.60	37.125	0.892
0.05	Half Disme	Silver	20.80	18.5625	0.892
0.01	Cent	Copper			
0.005	Half Cent	Copper			

Source: *Coinage Laws of the United States*, Act of April 2, 1792.

First period, 1792-1834.—The first legally authorized monetary system of the United States was adopted with the passage of the coinage act of 1792. This act provided for (1) the establishment of a mint, (2) the gold dollar unit consisting of 24.75 grains of fine gold and the silver dollar unit consisting of 371.25 grains of fine silver, (3) the adoption of the decimal system of denominations, and (4) the free and gratuitous coinage of certain specified gold and silver coins of the denomination, weight, and fineness indicated in the accompanying table, at a ratio of 1:15.

The coinage ratio of 1:15, which was adopted in 1792, was at first nearly in accord with the ratio of gold to silver in the bullion markets. Consequently, for a time, both gold and silver were coined at the mint and circulated side by side

within the country. Not long after the beginning of the nineteenth century, however, silver began to fall in value relatively to gold, with the result that the ratio of 1 : 15 over-rated silver at the mint. The latter metal, accordingly, tended to displace gold in the circulation of the country, and, by 1810-1812, gold had practically disappeared from circulation. Even earlier than this—by 1806—the amount of silver brought to the mint for coinage, as measured in dollar value, began to exceed that of gold, and this excess of silver over gold coinage continued with but one exception each year until 1833.⁵ The total dollar value of gold coined at the mint from 1806 to 1833 inclusive was but \$9,278,332, as compared with a total value of silver of \$34,364,669 during the same period.⁶ This was the case in spite of the fact that no silver dollars were coined by the mint from 1806 to 1836, the bulk of the silver coins which were struck during these years being silver half-dollars.⁷

Although the United States was legally on a bimetallic standard during the entire period, 1792-1834, with a mint ratio of 1 : 15, practically, the standard of value was silver for somewhat over one-half of this time, gold having almost disappeared from circulation by 1810. The obvious cause of the predominance of silver in the circulation was a mint ratio which over-valued silver and so made it unprofitable to import gold. In these circumstances, Mexican gold went to Spain (with a ratio of 1 : 16) and France (with a ratio of 1 : 15½), while Mexican silver came to the United States. In order to correct this situation, it was necessary to alter the ratio at which gold and silver would be received at the mint for coinage.

Second period, 1834-1862.—By the act of June 28, 1834, the mint ratio of gold to silver was altered, but to an extent that made it evident that gold would be over-valued at the mint instead of silver. The new law left the silver dollar of the same weight and fineness as before, but reduced the

⁵ "The exceptional gold coinage of 1820 was due to special importations of gold by the Bank of the United States, in order to bring about specie payments." Laughlin, *The History of Bimetallism in the United States*, p. 31, footnote 1. This particular year—1820—is the exception referred to.

⁶ Totals computed from the annual tot.'s for the years in question as shown in the *Report of the Director of the Mint* 1927, p. 94.

⁷ *Ibid.*, p. 90.

weight of pure gold in the eagle (and in other coins in proportion) from 247.5 grains to 232 grains, while its gross or standard weight was reduced from 270 grains to 258 grains, thus giving the gold coins a fineness of 0.899225. The unit of value, the dollar, was accordingly fixed at 23.2 grains of fine gold or 371.25 grains of fine silver, which resulted in a mint ratio of 1 : 16.002. A subsequent act, January 18, 1837, brought about a uniform fineness of .900 of gold and silver coins by reducing the gross weight of the silver dollar from 416 grains to 412.5 grains, leaving the fine weight as before, and raising the fine weight of the eagle to 232.2 grains without altering its standard weight of 258 grains. This changed the coinage ratio slightly to 1 : 15.988 plus, usually referred to as 1 : 16, but this change was of minor significance and did not prevent gold from being over-rated at the mint.

The ratio of 1 : 15, established by the act of 1792, had resulted in the withdrawal of gold from circulation. The acts of 1834 and 1837 established a mint ratio which over-valued gold, a fact which would lead one to expect the disappearance of silver from the circulation. For several years, however, silver coins remained in circulation in spite of the fact that fractional silver coins were full-weight and might have been expected to disappear. The explanation of this situation lies in the small discrepancy between the mint and market ratios together with the release of large amounts of silver from bank reserves, the silver being replaced by gold. Thus for several years the country operated under a bimetallic system that was apparently satisfactory.⁸

This comparatively satisfactory monetary situation was not to last, however. The gold discoveries of the late forties caused the value of gold to fall in relation to silver and substantially increased the discrepancy between the mint and market ratios, so that the withdrawal of silver from circulation became distinctly profitable. By 1850, the country's business was seriously embarrassed by lack of small change for retail transactions. Congress, in the act of March 3, 1849, had authorized the coinage of gold dollars (not pre-

⁸ For a complete analysis of this period, see N. Carothers, *Fractional Money*, pp. 98-101.

viously authorized), but no provision had been made against the withdrawal of fractional silver coins from circulation. Some alleviation of the difficulties was accomplished by the passage of the act of March 3, 1851. This law provided that the mint should coin a 3-cent piece weighing $12\frac{3}{8}$ grains and containing three parts of silver to one of copper. The intent of Congress was apparently that these 3-cent pieces should be freely coined, but the law was not specific in its instructions and was administered as a subsidiary coinage measure. It was passed, not primarily to remedy the scarcity of small coins, but to assist the post office in the sale of 3-cent postage stamps.

The benefits of the act of 1851 were not extensive. Retail trade still suffered measurably from a currency composed chiefly of gold dollars, 3-cent pieces, and much-worn fractional Spanish coins. In fact, the situation became so chaotic that Congress was finally forced to enact a more comprehensive measure. This was the coinage act of February 21, 1853. Under this law, the standard weight of half-dollars was reduced from 206.25 grains to 192 grains, and the weights of the other fractional silver coins were reduced in proportion. The fineness of .900 was retained, so that the reduction in the pure silver content of the fractional coins amounted to approximately 6.9 per cent. Fractional coins were to be struck on government account only and their legal tender powers were limited to sums not exceeding five dollars.

By reducing the silver content of the silver fractional coins, by limiting their coinage, and by restricting their legal tender powers, the act of 1853 established a true subsidiary coinage in the United States and took the first step toward placing the country upon a single gold basis. Silver dollars had never been coined in significant amounts since 1806, so that the removal of the rights of free coinage and full legal tender from fractional silver practically eliminated the use of silver as a standard of value.

The reduction in the fine silver content of the fractional coins was barely enough to insure their circulation, and a larger reduction might well have been made. Moreover, the law was badly administered in the years following 1853,

and was defective in not providing for the redemption of the subsidiary coins. Nevertheless, the coins did not, fortunately, attain a bullion value in excess of their money value, nor did the maladministration of the law do the damage that it might have under slightly less favorable conditions.⁹ The country accordingly maintained a gold currency with subsidiary silver until the time of the Civil War.

One other piece of monetary legislation, enacted prior to the Civil War, is deserving of mention. The act of February 21, 1857, provided for the coinage of a cent piece weighing 72 grains and containing 88 percent copper and 12 percent nickel. These coins were to be issued in exchange for gold, silver or pure copper coins and were also to be exchanged for Spanish and Mexican silver at fixed ratings regardless of the state of wear of the latter coins. The act resulted in a plethora of cent pieces, but it was successful in eliminating the Spanish and Mexican silver and in popularizing the use of the one-cent piece, since the new coins were smaller and more attractive than the old copper cents. The half-cent piece was also abolished by this act.¹⁰

Third period, 1862-1879. — During this period the monetary system of the United States was on an irredeemable paper basis. The issues of United States notes, or greenbacks as they are popularly termed, resulted from the war finance policy followed by the government at the time of the Civil War and marked the beginning of paper money issues by the United States government.¹¹ The act of February 25, 1862, authorized an initial issue of \$150,000,000, one-third of which was for the purpose of retiring a like amount of demand notes which had been issued in the summer of the previous year. A second issue of \$150,000,000 was authorized in July of 1862, \$50,000,000 of which was to be temporary. On March 3, 1863, a third issue of \$150,000,000

⁹ For an excellent account of the defects and illegal administration of this measure see Carothers, *op. cit.*, Chapter X.

¹⁰ See Carothers, *op. cit.*, Chapter XI for a detailed account of this legislation and its significance.

¹¹ This is not strictly accurate. Something over \$3,000,000 of treasury notes of less than \$100 denomination and bearing no interest were issued under the act of February 24, 1815, and were used as money. Because of the smallness of the issue, however, they have been disregarded. The demand notes of 1861 were a kind of cross between one year treasury notes and paper money, and have also been disregarded.

was authorized. This was the final issue, so that a total of \$450,000,000 of these notes was authorized and issued in the course of the war.

Since the notes so issued by the government were not redeemable in gold on demand, although they were full legal tender in all payments except duty on imports and interest on the public debt, and were also issued in excess of the monetary needs of the country, gold immediately went to a premium and greenbacks became the basic money of the system, a situation which continued until 1879. Not only was paper money the circulating medium for the larger denominations during this period, but for the fractional currency as well. Soon after the beginning of 1862, the paper dollar had depreciated in value to an extent that made profitable the withdrawal of subsidiary silver from circulation. The first legal tender act had prohibited the issuance of notes of less than five-dollar denominations. The second legal tender act authorized one-dollar notes, but this did not remedy the difficulties that business was experiencing as a result of the disappearance of subsidiary silver. Temporary unauthorized tokens—known as *shinplasters*—had been issued by business firms and individuals to meet the need for small change, but the resulting situation was highly unsatisfactory and demanded a remedy. Further, the Treasury was frequently embarrassed in the making of small payments. Consequently, on July 17, 1862, six days after the passage of the second legal tender act, another act was passed authorizing the use of postage stamps as money. Since the use of actual gummed stamps had serious drawbacks, stamps without glue, purporting to be issued under the authority of the law of July 17 but actually not legally authorized, were issued. On March 3, 1863, another law was passed which provided for the issuance of regular fractional notes by the government. This fractional paper currency remained in circulation throughout the Civil War and, in fact, was not redeemed in anything except greenbacks until after the passage of the resumption act of 1875.¹² Even the minor coins bore a premium during the war period, but

¹² A detailed account of the postage and fractional paper currency is to be found in Carothers, *op. cit.*, Chapter XIII.

remained in circulation as their metal content was not sufficient to warrant their melting or export.¹³

The subsequent history of the greenbacks may be briefly stated. An act, passed on April 12, 1866, provided that United States notes might be retired to the amount of \$10,000,000 during the following six months and at a rate of not more than \$4,000,000 per month thereafter. This authority was suspended by the act of February 4, 1868, only about \$44,000,000 of notes out of a possible \$70,000,000 having been retired by the latter date. After the panic of 1873, the government reissued \$26,000,000 of the canceled notes in response to a public demand for them. The amount outstanding after this reissue remained at \$382,000,000 until the gold resumption act of January 14, 1875, which provided for a reduction of this amount to \$300,000,000. By May 31, 1878, the amount of greenbacks outstanding had been reduced to \$346,681,016. An act of the latter date abruptly halted the policy of deflation and required the notes to be reissued whenever redeemed. This requirement has not been altered by subsequent legislation, and the last mentioned amount still remains outstanding. From January 1, 1879, when gold resumption began, until 1933, United States notes were redeemable in gold at the Treasury.¹⁴

The act of February 12, 1873.—Although the United States was on an irredeemable paper basis until 1879, two monetary laws of importance—aside from the resumption act—were passed in the later years of this period. The first of these was the act of February 12, 1873. The measure was designed to be a general revision of the coinage laws and many of its provisions were unimportant from the point of view of monetary development. It may be noted that the gross weight of the half-dollar was altered from 192 grains to 12½ grams (192.9 grains), the present weight, and the other silver subsidiary coins were changed in proportion. The silver half-dime, the silver three-cent piece and the bronze two-cent piece were discontinued. The most significant feature of this law, from the point of view of

¹³ *Ibid.*, Chapter XIV.

¹⁴ The factual material contained in these sections has been procured from a government pamphlet, *Monetary Systems of the Principal Countries of the World*, compiled in the office of the Director of the Mint, 1916, pp. 5-7.

monetary development, however, was that it officially dropped the silver dollar from the list of coins which could be struck at the mint. A heavier trade dollar of silver was authorized, presumably for export trade purposes, but the standard silver dollar was definitely dropped. Since the other authorized silver coins were subsidiary, this had the effect of placing the United States, legally, upon a single gold standard. Very shortly after the passage of this act, the silver interests, for reasons which will appear presently, found to their chagrin that it was no longer possible to have their silver freely coined into standard dollars. They thereupon claimed that the law of 1873 had resulted from a conspiracy in Congress against these interests, and they accordingly dubbed it "the Crime of '73." That such an accusation was false is perfectly clear from a study of the facts. The bill was openly passed in the presence of the representatives of the silver interests without arousing any great outcry. As a matter of fact, the coinage of silver dollars had been trifling since the opening of the mint and the silver dollar coin was dropped because there was not at that time, and had not been for years, any noteworthy demand for it.

The reason for the vexation of the silver owners with the act of 1873 is to be found in a change in the market ratio of gold to silver which occurred about this time. The mint ratio 1 : 15.988, which had been on the statute books since 1837, had over-rated gold and, by the operation of Gresham's law, had caused silver to disappear from circulation. During the latter years of the period, 1837-1873, the value of silver had been falling relatively to that of gold. This decrease in the value of silver resulted from a rapidly increasing production of the metal, as compared with gold, from metallurgical improvements in recovering the metal from the ore, and from certain changes in the monetary arrangements of Germany and other European countries. Although this situation was not recognized by the lawmakers at the time of the passage of the act of 1873, it nevertheless existed. By 1873, the market ratio of gold to silver had reached 1 : 15.93, had descended to 1 : 16.16 by 1874, to

1:17.75 by 1876.¹⁵ Clearly the coinage of silver dollars at the old ratio of 1:15.988 would have proved highly profitable by the latter year. The discontent of the silver interests with the monetary situation following 1873 is, therefore, easily explained.

The act of February 28, 1878.—Nor were the silver owners satisfied to let matters rest as they were. Successive attempts to secure legislation for their own benefit were finally successful in part, but in part only. The outcome of these efforts was the act of February 28, 1878, generally known as the Bland-Allison Act. By this law, the Secretary of the Treasury was directed to purchase silver bullion, at its market price, to the extent of not less than \$2,000,000 worth nor more than \$4,000,000 worth per month, and to require this bullion to be coined into standard silver dollars of the former weight and fineness. This was limited coinage and was not what the silver interests wanted. They were forced to rest content with this expedient, however, for a number of years. Meanwhile, the Treasury began the redemption of United States notes in gold on January 1, 1879, and the country was once again on a gold standard.

Fourth period, 1879-1900.—As a result of favorable natural and economic forces, the country was able to maintain the gold redemption of greenbacks which had been begun in 1879. Nevertheless, all was not clear sailing. The silver group, not content with the act of 1878, as already noted, continued active in its efforts to obtain legislation more suited to its purposes. The result was the *Sherman Silver-Purchase Act of 1890*. By the terms of this act, the Secretary of the Treasury was directed to purchase monthly, at a price not to exceed one dollar for 371.25 grains, 4,500,000 ounces of silver or such fraction thereof as should be offered on the market. To pay for this silver, the Secretary was authorized to issue Treasury notes of the United States. These notes were to be redeemable at the Treasury on demand *in either gold or silver* at the discretion of the Secretary of the Treasury, and they were to be full legal tender in the payment of debts except where otherwise expressly stipulated in the contract. Of the bullion purchased each

¹⁵ *Report of the Director of the Mint 1927*, p. 112.

month, 2,000,000 ounces was to be coined into silver dollars each month until July 1, 1891. After that, as much was to be coined as was necessary to provide for the redemption in silver of the Treasury notes issued under the authority of the act.

The expulsion of gold.—The results of the act of 1890 very nearly caused the departure of the United States from the gold standard. Under the operation of the act, nearly \$156,000,000 of legal tender notes was added to the lawful money stock of the country. The natural effect was to inflate the currency and increase speculative activity in the organized markets which, in turn, resulted in a loss of gold by export to foreign countries. The usual procedure by which the metal was obtained for foreign shipment was by the presentation of legal tender notes to the Treasury for redemption in gold, so that large exports of gold naturally resulted in a drain on the Treasury's stock of coin and bullion. In 1891 and 1892, the government's reserve for the redemption of legal tenders was drawn down to a marked extent. The year 1893 was a panic year, and it was the opinion of many that the difficulties of business were a result of the undue increase in the country's monetary stock through the issuance of Treasury notes to pay for the monthly purchase of silver bullion. With difficulty an act was pushed through Congress (November 1, 1893), repealing the purchase clause of the Silver Purchase Act of 1890, but the mischief had already been done. It will be remembered that the redemption of Treasury notes of 1890 in either gold or silver was made optional with the Secretary of the Treasury. Treasury notes, therefore, might have been redeemed in silver, but gold redemption was maintained during all of this troublesome period in spite of the attenuation of the Treasury's gold reserve. To continue the redemption of legal tenders in gold, however, was not easy. Two issues of bonds, of \$50,000,000 each, were sold for gold in 1894, one in January and one in November. The proceeds from these bond sales built up the gold reserve temporarily, but in each case it was soon drawn down again below the \$100,000,000 mark. Early in 1895, the gold reserve decreased rapidly and a departure from gold redemption seemed inevitable.

Such an unfortunate occurrence was avoided through a timely agreement between President Cleveland and certain investment banking interests which involved the sale of another \$62,000,000 of bonds to the investment bankers for gold. For a time the reserve was restored, but later in the year it again fell below \$100,000,000. Finally, it was found necessary to sell another \$100,000,000 of bonds in February 1896. This loan was successful and subsequent difficulties with the gold reserve were avoided for the most part.

The act of March 14, 1900.—The death knell of the silver interests, at least so far as monetary legislation was concerned, was sounded in the presidential campaign of 1896. Under the leadership of the eloquent William Jennings Bryan, the Democratic party engaged in a hard contest for the presidency and the control of Congress on a free silver platform. The return to the bimetallic system was favored with the free coinage of both gold and silver at the old ratio of 1 : 15.988, or "16 to 1," as it was called. However, since the market ratio of gold to silver was approximately 1 : 30 in 1896, a return to the old system would have resulted in a single silver standard, and the sanction by the government of a substantial partial repudiation of all the then existing debts which had been contracted prior to 1896. Fortunately for the reputation and welfare of the country, Bryan and his free silver followers were defeated at the polls. Bryan again advocated free silver coinage in the campaign of 1900, but by that time the question was pretty largely a dead issue, the so-called Gold Standard Act of 1900 having been passed before the presidential campaign got under way.

The title "Gold Standard Act" has been popularly applied to the act of March 14, 1900, because this statute definitely placed the country on a single gold standard. In the words of the opening section of the law, it was enacted "that the dollar consisting of twenty-five and eighth-tenths grains of gold nine-tenths fine . . . shall be the standard unit of value, and all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard, and it shall be the duty of the Secretary of

the Treasury to maintain such parity." The act further provided that a gold redemption fund of \$150,000,000 be maintained by the Secretary of the Treasury for the purpose of redeeming United States notes and Treasury notes of 1890 in gold. With regard to the latter notes, provision was made for the coining of subsidiary silver (up to \$100,000,000 in amount) from the bullion purchased under authority of the act of 1890, and for the cancellation of a corresponding amount of Treasury notes, when they were presented for redemption in silver. The provision of the law of June 13, 1898, requiring the coinage of silver dollars from the bullion purchased with Treasury notes, was re-enacted. For the rest, the act contained certain provisions concerning the issuance of gold and silver certificates, and refunded certain bond issues which furnished security for national bank notes.

Fifth period, 1900-1932. — After the passage of the act of March 14, 1900, no major developments occurred in the governmental phases of the monetary system until shortly after the entrance of the United States into the Great War. In the fall of 1917, by presidential proclamation, the Federal Reserve Board was clothed with discretionary power to restrict the exportation of gold to foreign countries, no gold to be exported without the express permission of the Board. While some few gold exports were permitted, the Board stated in its Annual Report for 1917 that "applications for permission to ship gold to European neutral countries have, except for a few days following the date of the order, been invariably declined."¹⁶ This embargo on gold exports continued until the summer of 1919.¹⁷ For this brief period, therefore, the United States was not on a full gold standard. Convertibility of the other moneys of the system into gold, although discouraged, was maintained throughout the war. The maintenance of the gold standard, however, requires not only the convertibility of other moneys into gold, but freedom on the part of the converter to make use of the gold obtained as he sees fit, whether it be for export to foreign countries or for use in the arts.

¹⁶ P. 21.

¹⁷ *Annual Report of the Federal Reserve Board 1919*, p. 50.

The United States, by restricting exports of the metal, prevented for a time the free flow of gold from the domestic money stock into other uses and accordingly abandoned the full gold standard for the period in question. While this procedure may have been justified for the purpose of retaining a large domestic gold stock as a basis for wartime credit expansion, it resulted, nevertheless, in the temporary departure from the gold standard which we have noted.

The War and the silver situation.—One other occurrence of importance had to do with the influence of the War on the position of the silver dollar in the monetary system. The silver dollar has long held an anomalous position in this system. Having several of the characteristics of subsidiary money, it is nevertheless full legal tender, is termed standard money by law, and is not specifically convertible into gold, although an indirect convertibility has been maintained as already explained. The gold standard act of 1900 made no provision for the elimination of the silver dollar from the monetary system and no particularly favorable opportunity to retire this unnecessary form of government credit money presented itself until the War period. As the War progressed, the value of silver rose rapidly relatively to gold. Meanwhile, England, faced with the necessity of paying large balances in silver in India and the Orient, appealed to the United States to sell her the necessary bullion from our stock of silver dollars. To accomplish this end, Congress passed the Pittman Act in April 1918, authorizing the retirement of as many silver certificates as possible, the melting up of the silver dollars held in the Treasury behind these certificates, and issuance of Federal Reserve bank notes secured by Pittman certificates of indebtedness to take the place of the silver certificates withdrawn from circulation. The silver bullion was then to be shipped to India and some other Oriental countries for the account of England and to be paid for at the existing high price.

If the provisions of the Pittman Act had stopped here, its passage would have been a most happy occurrence. The silver bullion was readily disposable at the highest price which had existed for years, and the United States had an

excellent opportunity to rid its monetary system of an anomalous and unnecessary element, the silver dollar. Unfortunately, however, the act went on to authorize the subsequent purchase, from domestic silver producers at a price of one dollar per ounce, of a sufficient amount of silver bullion to replace all the silver dollars which were to be broken up and shipped from the country. The purchase and coinage of this silver was shortly completed,¹⁸ with the result that our present-day monetary system still finds itself burdened with the anomalous standard silver dollar which is not standard, and its companion, the silver certificate. Not for years, if ever, will another opportunity present itself to the United States government to be rid of the silver dollar in such easy and profitable fashion, nor is there any reason to believe that such an opportunity would be grasped if it did occur. On the other hand, should the government ever decide to eliminate the silver dollar, it could do so by using the silver in this stock of dollars for the coinage of subsidiary silver, instead of buying new silver in the market for this purpose. This method would be effective, but the profit to the government would be less than it would have been had advantage been taken of the opportunity offered in 1918.

The gold standard during the depression.—After the resumption of unrestricted gold exports in the summer of 1919, the gold standard was maintained continuously in the United States until the spring of 1933. In the autumn of 1931, following the abandonment of the gold standard by England and a substantial group of other countries, foreign funds invested or deposited in New York were withdrawn in large amounts. This led to a loss of gold to abroad amounting to about \$700,000,000 in the short space of six weeks. Again, in 1932, the gold stock of the country was reduced by nearly \$500,000,000 in May and June. In spite of these large losses, no real threat to the maintenance of the gold standard developed, although President Hoover, in a campaign speech the following autumn, asserted that the country had been on the verge of abandoning gold, a state-

¹⁸ The actual cash loss on these purchases was some \$70,000,000. The real loss to the country was much greater than this. See N. Carothers, "Silver—a Senate Racket." *North American Review*, January 1932, p. 10.

ment for which he was chided by the opposing presidential candidate, Mr. Roosevelt. Actually, the international position of the United States, together with its ample gold stock, were such as to make any necessity for a departure from the gold standard remote.

Conclusion.—Because of the radical changes in our monetary system since 1932, it seems desirable, in concluding this chapter, to set up a classification of money in the United States as of the close of that year. This may be done by reproducing the classification which was given at the end of Chapter II, with the moneys of the United States' monetary system in their proper places.

I. Full-bodied money

A. Standard gold coin (and certificates)—full legal tender

Double eagle (\$20)

Eagle (\$10)

Half eagle (\$5)

Gold certificates (\$10 to \$10,000)

II. Credit money

A. Government credit money

1. Paper promises to pay standard money

United States notes—full legal tender except in payment of import duties and interest on the public debt

Treasury notes of 1890—full legal tender unless otherwise specified in the contract

2. Short-weight metallic money

a. Unit and larger denominations

Silver dollars—full legal tender

Silver certificates (\$1 to \$100)—not legal tender

b. Subsidiary silver coin—legal tender to \$10

Half dollar

Quarter dollar

Dime

c. Minor coin—legal tender to 25 cents

Five cent piece (75 per cent copper—25 per cent nickel)

Cent (95 per cent copper—5 per cent tin and zinc)

B. Bank credit money

1. Bank notes

Federal reserve notes (\$5 to \$10,000)—receivable at par for all public duties and by Federal Reserve and member banks

Federal reserve bank notes (\$5 to \$1,000)—receivable at par for all public duties and by Federal Reserve and member banks

National bank notes (\$5 to \$1,000)—receivable at par for all public duties (except duties on imports) and by all national banks.

2. Check currency

Demand deposits subject to check — not legal tender.

We must now turn our attention to the unusual monetary developments which have occurred since 1932.

REFERENCES

- Carothers, N. *Fractional Money*. New York. 1930.
 Dewey, D. R. *Financial History of the United States*. New York (12th Edition). 1934.
 Hepburn, A. B. *A History of Currency in the United States*. New York (Revised Edition). 1924.
 Kilborne, R. D. and Woodworth, G. W. *Principles of Money and Banking*.
 Laughlin, J. L. *The History of Bimetallism in the United States*. New York. 1893.
 Mitchell, W. C. *A History of the Greenbacks*. Chicago. 1903.
 Noyes, A. D. *Forty Years of American Finance, 1865-1907*. New York. 1909.
 Noyes, A. D. *The War Period of American Finance, 1908-1925*. New York. 1926.
 White, H. *Money and Banking*, Books I and II.
Monetary Systems of the Principal Countries of the World.
Annual Reports of the Director of the Mint.

CHAPTER IV

MONETARY DEVELOPMENTS SINCE 1932

Gold Standard generally approved.—The close of the year 1932 found the currencies of the world in a badly disorganized state. Only eleven countries, less than half of them important commercially, retained a full gold standard, a handful of other countries maintaining the gold parity of their currencies by means of exchange regulations and restrictions. In spite of the conditions which prevailed, there seemed to be a desire on the part of the leading countries of the world to return to the gold standard as soon as it was feasible to do so. The decision to return to gold lay largely with England, since a considerable group of countries had tied their currencies to sterling after England departed from the gold standard in September 1931; and, although the English authorities were obviously opposed to being rushed into action along this line, the aim of that country appeared to be clearly in the direction of a return to gold under satisfactory conditions.

Although a presidential campaign was under way in the United States in 1932, there seemed to be no conflict between the major political parties on the question of maintaining the gold standard. Mr. Roosevelt, the Democratic candidate for the Presidency, had several times during his campaign emphasized the importance of a sound currency and President Hoover was also committed to the maintenance of the gold standard. Under these circumstances it seemed improbable that the United States would not exert every effort toward the re-establishment of the gold standard throughout the civilized world.

MONETARY DEVELOPMENTS IN 1933

Views of the Preparatory Commission of experts.—In January, 1933, the Preparatory Commission of experts for

the world monetary and economic conference submitted its Draft Annotated Agenda. Although the English experts favored the restoration of commodity prices, to close the gap between prices and costs and to ease the burden of debts, as a preliminary step to the restoration of monetary stability, while the American and other gold standard delegations believed a return to gold to be a desirable first step, it was still possible for the experts to render concerted recommendations. The conclusions set forth by the Commission may be summarized as follows :

A. The Commission favored the restoration of an effective international gold standard for the countries which had departed from gold, the restoration of the gold standard to be effected at such time as conditions would permit.

B. Some increase in commodity prices was favored, with the suggestion that a general policy of easy money, designed to promote a healthy expansion of business, might be beneficial where monetary conditions made it possible to pursue such a policy.

C. The abolition of exchange restrictions and the restoration of a normal degree of international lending were advocated as essential to economic recovery.

D. Finally, greater freedom of international trade was felt by the Commission to be essential.

Although there were differences of opinion among members of the Commission of experts as to the exact order in which these various steps should be taken, it is clear that there was substantial unanimity of judgment regarding the desirability of re-establishing the international gold standard and of restoring international trade by the abolition of exchange restrictions, import quotas and unduly high tariff barriers.

It was accordingly felt that, following the inauguration of the Roosevelt Administration in the United States, the efforts of the Administration would be strongly in the direction of bringing order out of chaos through the hearty co-operation of the United States with other leading countries which were to participate in the forthcoming World Monetary and Economic Conference.

The banking crisis in the United States.—The inauguration of President Roosevelt, however, brought with it

domestic difficulties which absorbed, for a time, the entire attention of the new Administration. Banking difficulties in the Detroit area had resulted in the proclamation by Governor Comstock of a bank moratorium in Michigan on February 14, 1933. This was followed by similar bank holidays in other states in fairly rapid succession until, on March 3, the banks of twenty-two states were either closed or operating on an extremely restricted basis. This mounting number of statewide moratoria placed a continually increasing strain on the banks of the remaining states, including the Federal Reserve banks, and on March 4, the date of Mr. Roosevelt's inauguration, the rest of the banks of the country closed their doors.

Under these circumstances, the initial activities of the new Administration were necessarily directed toward the problem of re-opening the banks. Early in the morning of March 6 the President proclaimed a four-day bank moratorium for all of the banks of the country, pending the assembling of Congress in special session on March 9. Acting in the emergency under the authority of the Trading with the Enemy Act, the President forbade the exportation of gold and ordered everyone holding gold coin to turn it in at the Treasury or Federal Reserve banks in exchange for other forms of money. This action effectively removed the United States from the gold standard.

The Emergency Banking Act of March 9, 1933, confirmed the President's recent proclamations and provided machinery for re-opening the banks.¹ Although a few observers were inclined to feel that the restrictions placed on the exportation and hoarding of gold were unnecessary, even for a brief interval, there was no general condemnation of the President for the action he had taken in view of the existing emergency. In the light of Mr. Roosevelt's vigorous campaign statements in regard to the gold standard, it was generally felt that the departure of the United States from this standard at the time of the banking crisis was but a temporary expedient, made necessary by the gravity of the emergency.

¹ For a discussion of the banking crisis and of the provisions of the Emergency Banking Act, see Chapter X.

The gold embargo of April 20. — The period required for the re-opening of the banks was about ten days. Only sound banks were licensed to re-open on an unrestricted basis, but, by March 15, the banks which had obtained licenses² were again in operation throughout the country. Although the final liquidation or subsequent re-opening of unlicensed banks still constituted a serious problem, the acute phase of the banking crisis was definitely over by the middle of March. With the re-opening of the great majority of the banks of the country, hand-to-hand money, previously hoarded, began to flow back into the banking system at a rapid rate, and there appeared to be no reason why a return to an unrestricted gold standard need be longer delayed. Actually, no action restoring the full gold standard was taken at that time, although gold exports under license were permitted if essential. Nevertheless, it was taken for granted that the country would return to gold at an early date, as is demonstrated by the fact that the exchange rate on France — a sensitive indicator of financial opinion — remained practically at the gold par until the middle of April in spite of the fact that the United States was not on the gold standard during the month in question.

Toward the middle of April, however, a somewhat powerful inflationary sentiment developed in Congress and the quick return of the United States to the gold standard became more doubtful. This doubt was re-enforced when, on April 20, the President proclaimed an embargo of indefinite duration on gold exports, following the issuance, on April 5, of new regulations against the hoarding of gold by individuals throughout the country. The gold embargo of April 20 made it obvious that a formal abandonment of the gold standard was intended, and the dollar began to depreciate rapidly on the foreign exchanges.

Washington consultations with foreign powers. — Meanwhile, arrangements had been made for consultations between President Roosevelt and a number of foreign ministers to discuss matters of importance which were slated for consideration at the World Monetary and Economic Con-

² These banks controlled about 90 per cent of the banking resources of the country.

ference. The Administration's change of front regarding monetary policy, as evidenced by the gold embargo of April 20, was doubtless somewhat disconcerting to the foreign envoys who were on their way to Washington, but did not interfere with holding the scheduled consultations.

The results of the Washington conferences, as released to the Press, appeared, on the whole, to be very satisfactory. Agreements were reached between President Roosevelt and the envoys from England, France and Italy which indicated that the President and all of the foreign representatives favored some restoration of commodity price levels, the elimination of exchange restrictions and import quotas, and the restitution of a stable international monetary standard. In the American-English statement, however, the restoration of commodity prices was recognized as primary and fundamental, efforts in this direction to be accompanied by a moderation of existing exchange restrictions and to be followed, eventually, by the re-establishment of a stable monetary standard. In the American-French statement, on the other hand, it was agreed that the increase in prices and economic activity was to be accomplished by diminishing quotas and exchange restrictions and by re-establishing normal monetary conditions. Finally, the American-Italian statement emphasized the necessity of a return to the gold standard, to be accompanied by a relaxation of exchange and trade restrictions, the inference being that such action was considered a necessary prerequisite to a revival of business and prices. Moreover, the American-Italian statement contained an emphatic avowal of the urgency of the success of the world conference and was extremely heartening to those who had feared that the Administration might not be contemplating full co-operation with the other governments participating in the conference.

Announcement of monetary policy. — On the evening of May 7, 1933, over a nationwide broadcast, the President gave an account of his stewardship to date, and made statements which cast some light on what might be expected in the future. In the latter connection the President said :

The Administration has the definite objective of raising commodity prices to such an extent that those who have borrowed money will, on

the average, be able to repay that money in the same kind of dollar which they borrowed.

We do not seek to let them get such a cheap dollar that they will be able to pay back a great deal less than they borrowed.

In other words we seek to correct a wrong and not to create another wrong in the opposite direction. That is why powers are being given to the Administration to provide, if necessary, for an enlargement of credit, in order to correct the existing wrong. These powers will be used when, as, and if it may be necessary to accomplish the purpose.

The definite determination to raise commodity prices was first asserted in this address. The alleged necessity for higher prices was accordingly offered in explanation of the powers granted to the President in the inflation bill, then before Congress and slated to become law at an early date.

As opposed to a possible radical turn in Administration monetary policy, the President, in the same address, emphasized the importance of the agreements reached in the recent consultations with foreign powers and stressed the necessity for complete co-operation in the forthcoming World Monetary and Economic Conference to insure its success.

The Inflation Act.—The Inflation Act, to which reference was made in an earlier paragraph, appeared as Title III of the Agricultural Adjustment Act of May 12, 1933. This act gave the President the power to inflate currency and credit by practically all historically and currently known methods. By its provisions the President was authorized :

A. To direct the Secretary of the Treasury to enter into agreements with the Federal Reserve banks and the Federal Reserve Board whereby the Board would permit the Reserve banks, under such agreements, to buy obligations of the United States in the open market to the extent of \$3,000,000,000, the Reserve banks to be relieved from any penalty for a deficiency in reserves if such deficiency should result from this action ;

B. To direct the Secretary of the Treasury to cause to be issued United States notes up to \$3,000,000,000 in amount should the preceding provision not give the desired results. Such notes might be issued "only for the purpose of meeting maturing Federal obligations to repay sums borrowed by the United States and for purchasing United States bonds and other interest-bearing obligations of the United States." The Secretary of the Treasury was also directed to retire notes so issued at the rate of 4 per cent per annum ;

C. To fix the weights of the gold and silver dollar at such amounts as he finds necessary . . . and to provide for the unlimited coinage of

gold and silver at the ratio so fixed ; or to reduce the weight of the gold dollar (without reference to silver) by any amount up to 50 per cent ;

D. To accept silver at a price of 50 cents per ounce up to \$200,000,000 from foreign governments in payment of debts due to the United States.

The first three of the foregoing provisions were inflationary in nature. If the option given to the President thus to expand currency and credit should be fully exerted, a runaway inflation of immense proportions might develop. Consequently, the act contained two provisions aimed at control of credit expansion should such an eventuality occur. First, "the Federal Reserve Board, with the approval of the Secretary of the Treasury, may require the Federal Reserve banks to take such action as may be necessary, in the judgment of the Board and of the Secretary of the Treasury, to prevent undue credit expansion." Second, "the Federal Reserve Board, upon the affirmative vote of not less than five of its members and with the approval of the President, may declare that an emergency exists by reason of credit expansion, and may by regulation during such emergency increase or decrease from time to time, in its discretion, the reserve balances required to be maintained against demand or time deposits."

Although attention has largely been centered on the inflationary provisions of the act, it is obvious that these methods of control might become of dominating importance at a later date and were hence wisely included in the act.

These powers were not immediately used by the President and it was felt in many quarters that he would make chief use of the powers conferred upon him in reaching an agreement on the question of currency stabilization at the approaching World Conference. This opinion was re-inforced by his message of May 16 to the heads of the interested foreign powers in which he again asserted the grave necessity for the success of the Conference and the international stabilization of currencies.

The abrogation of the gold clause.—Shortly prior to the opening of the World Economic Conference, Congress passed a joint resolution, which was signed by the President

on June 5, 1933, abrogating the gold clause in existing governmental and private obligations. The resolution provided that bonds, mortgages and other contractual obligations, although stated to be payable in gold coin of existing weight and fineness, should thereafter be payable in legal tender money, and declared that "all coins and currencies of the United States (including Federal Reserve notes and circulating notes of Federal Reserve banks and national banking associations) heretofore or hereafter coined or issued, shall be legal tender for all debts, public and private. . ." This resolution merely gave legal sanction to the existing situation, and, although it came as a shock to some, it was not inconsistent with the monetary program then being followed, nor did it necessarily imperil the success of the approaching negotiations at the World Conference.

The World Monetary and Economic Conference.—The World Economic Conference convened on June 12. The currency problem presented certain difficult angles at best, but some agreement might have been reached had the United States been willing to co-operate with France and England. A tariff truce for the period of the conference had been adopted, and it was felt that a currency truce would also be desirable. The problem involved the maintenance of the gold standard by France and the restriction of the movement of British and American exchange rates within narrow limits by means of a joint or separate equalization funds and co-operative action between the central banks of the three countries. The task of the exchange experts at the conference, in working out a plan of international co-operation, was to determine the exact character of central bank co-operation necessary, to fix the limits of exchange rate fluctuation which the non-gold countries might permit, and to fix the ratios at which the dollar and the pound should be stabilized in relation to the franc.³ There were some differences of opinion on the part of England, France and the United States with regard to the two last-named objectives,

³ Pasvolksy, *Current Monetary Issues*, pp. 66-67. The material presented in the following paragraphs is based largely on the discussion in this excellent book. While many of the facts noted are obtainable from press reports, Mr. Pasvolksy's presence in London enabled him to cast light on the subject in regard to certain points not adequately presented in the newspapers.

but the barriers were not wholly insurmountable. However, England and France were committed to an anti-inflation policy and requested President Roosevelt not to make use of his inflationary powers for a temporary period. The President, on the other hand, was unwilling to agree to such an undertaking.

In spite of the difficulties involved, it appeared for a time as if some agreement on the question of currency stabilization might be reached. Rumors that a stabilization agreement had been, or would shortly be, arrived at were featured in the press, with dampening effects on the speculative ardor then being displayed in the security and commodity markets of the United States. On June 15, the dollar advanced sharply and security and some important commodity prices suffered a marked decline in New York. Unfortunately, such a price reaction did not meet with the approval of the Administration and President Roosevelt ordered a discontinuance of the stabilization negotiations in London, announcing that immediate temporary stabilization appeared to the American government to be untimely.⁴

In spite of the abrupt cessation of efforts to reach a currency truce, negotiations at the conference proceeded. In these negotiations the controversy over credit and prices again came into evidence. In brief, the British position was that central banking action in the direction of easy money was desirable to promote a revival of business activity and rising prices. The French and delegates from other gold standard countries felt that confidence in the currency was the primary requisite to revival, central banking action being useful only after business and prices had begun to recover. The United States, on the other hand, was committed to a program of price raising as a means of recovery, the theory being that prices had to be increased as an antecedent to business revival.

Obviously, in the light of these divergent views, no really definite agreement was possible. However, on the initiative of the gold standard countries, a plan for an innocuous joint declaration on monetary policy was discussed and generally approved by the delegates. In brief this declaration asserted

⁴ *Ibid.*, pp. 69-70.

the agreement of non-gold-standard signatory countries to stabilize on a gold basis at such times and parities as they should see fit, and of the gold standard countries to maintain the free gold standard at existing parities.

Clearly this declaration was little more than a general statement of objectives which practically any country intending to return eventually to the gold standard might sign without compunction. It received the approval of the American delegation as well as that of Professor Moley, who had come to the conference as a special emissary of the President. The text of the declaration was accordingly submitted to President Roosevelt for approval on June 30, with a general belief that it would receive his support. It was a great shock, therefore, when the President, in a message addressed to the Conference, rejected American participation in the agreement in no uncertain terms. In this message he asserted that "the sound internal economic system of a nation is a greater factor in its well-being than the price of its currency in changing terms of the currencies of other nations." He also reaffirmed the intention of the United States to raise commodity prices (presumably to the pre-depression level) and then to stabilize them for a generation.

This message, in refusing bluntly to co-operate toward the attainment of monetary stabilization, was successful in scuttling the conference. By indicating an intention to work toward a commodity dollar, the President effectively barred taking any further steps toward stabilization of exchange rates. Although half-hearted attempts to reach agreements in other directions were made, the fact that currency and exchange stabilization were of primary importance made the practical termination of the conference inevitable.

Developments following the conference.—Following the President's message to the conference, certain actions which are deserving of mention were taken in the international monetary field. The gold standard countries—France, Belgium, Holland, Switzerland, Italy and Poland—formed what became known as the gold bloc by adhering to a declaration to maintain the free gold standard at existing parities in their respective countries.

The countries concerned felt that this action would be beneficial to themselves and that the gold bloc would form a basis from which to work in the event of a subsequent return of the non-gold countries to the gold standard.

Representatives of countries forming the British Commonwealth of Nations signed a statement reaffirming the resolutions with respect to monetary policy which had been adopted previously at the Ottawa Conference. The statement declared that "the ultimate aim of monetary policy should be the restoration of a satisfactory international gold standard . . . with a view to avoiding, so far as may be found practicable, undue fluctuation in the purchasing power of gold." It was also stated that stability in world prices, not merely the price level of a particular country, was the monetary problem confronting the nations of the world.

Monetary developments in the United States.—Following the adjournment of the World Conference, the United States followed a policy of inaction in monetary affairs for a number of months. Externally, dollar exchange rates fluctuated in response to market and speculative forces, the government making no concerted attempt to limit or control these movements. The result was that the rate for French exchange, which had risen above 5.50 cents about the middle of July, fell to near 5.25 cents in August and thereafter rose irregularly to 6.00 cents at the end of September. This represented a depreciation of the dollar at the latter date of approximately 37 per cent. The franc rate then fell to 5.50 cents shortly before the Gold Purchase Plan was instituted by the Administration on October 25.

Internally, the monetary policy of the government was also one of *laissez faire*, the attention of the Administration being concentrated on its N.R.A. and A.A.A. programs during these months. Meanwhile, between June and October, the B. of L. S. wholesale price index showed a moderate increase from 65 to 71 per cent of the 1926 price level. In order to protect American producers of gold and to stimulate domestic gold production, the President, on August 29, 1933, issued an executive order authorizing the Secretary of the Treasury to buy newly mined domestic gold at the best price obtainable in the free gold markets of the world.

Prior to this time, domestically mined gold could be sold only at the statutory price of \$20.67 per ounce, whereas gold was commanding a substantially higher price in the free gold markets.

The only inflationary action taken prior to the inauguration of the Gold Purchase Plan was the purchase of substantial amounts of open market securities by the Federal Reserve banks. Reserve bank holdings of United States securities rose from \$1,837,000,000 on May 17 to \$2,400,000,000 on October 25. These purchases, however, were apparently undertaken by the Reserve banks independently of the provision for open market purchases contained in the Inflation Act.

The Gold Purchase Plan.—It was evident, by October 1933, that the action of the Federal Reserve banks in the purchase of government securities was not alone sufficient to bring about a rise in commodity prices of the extent desired by the Administration. Although the wholesale commodity price level had risen a trifle more than nine per cent from June to October (65 to 71), as already noted, it was still substantially below the 1926 level, which was generally thought to be the desideratum of the Administration. Moreover, the prices of farm products, which had risen from a low of 41 in February to 60 in July, had receded to 56 by October, while prices of commodities other than farm products and foods had risen between July and October by 11.5 per cent, thus again widening the gap between prices of agricultural and other commodities.

As a result of the downward tendency in farm prices from the July peak, demands for a more vigorous inflationary policy were heard from the agricultural sections. The general opinion in these parts seemed to be in favor of the issuance of greenbacks, under the provisions of the Inflation Act, or a remonetization of silver, or both. Another powerful group, however, including the Committee for the Nation⁵ and the President's chief monetary advisor, Professor Warren, preferred devaluation to currency inflation as a price-raising mechanism. The influence of the devaluationists was apparently the more powerful with the President, for

⁵ A committee of industrialists favoring "reflation of prices."

the next major step in the country's monetary policy, the Gold Purchase Plan, while not technically constituting devaluation, was obviously precedent to a later devaluation of the traditional dollar unit.

In a radio address on October 22, 1933, President Roosevelt reasserted the policy of the Administration to raise and then stabilize commodity prices and announced the nature of the plan and his reasons for inaugurating it in the following words :

Because of conditions in this country and because of events beyond our control in other parts of the world, it becomes increasingly important to develop and apply further measures which may be necessary from time to time to control the gold value of our own dollar at home.

Our dollar is now altogether too greatly influenced by the accidents of international trade, by the internal policies of other nations and by political disturbance in other continents.

Therefore the United States must take firmly in its own hands the control of the gold value of our dollar. This is necessary in order to prevent dollar disturbances from swinging us away from our ultimate goal, namely, the continued recovery of our commodity prices.

As a further effective means to this end, I am going to establish a government market for gold in the United States. Therefore, under the clearly defined authority of existing law, I am authorizing the Reconstruction Finance Corporation to buy gold newly mined in the United States at prices to be determined from time to time after consultation with the Secretary of the Treasury and the President. Whenever necessary to the end in view, we shall also buy or sell gold in the world market.

My aim in taking this step is to establish and maintain continuous control.

This is a policy and not an expedient.

It is not to be used merely to offset a temporary fall in prices. We are thus continuing to move toward a managed currency. . .

The plan thus announced was put into operation on Wednesday, October 25, the official price of newly-mined gold for that day being fixed at \$31.36 per ounce, a figure only slightly in excess of the world price. The subsequent depreciation of the dollar through raising the price of gold is indicated in the accompanying table which shows changes in the official price from October 25, 1933, to January 31, 1934, the period during which the plan was in operation.

Thus the United States willfully depreciated its currency for the purpose of raising the level of commodity prices,

it being the belief of the Administration advisors, especially Professor Warren, that the price level would respond reasonably promptly and accurately to changes in the price of gold.

TABLE I

CHANGES IN THE OFFICIAL PRICE OF GOLD UNDER THE GOLD PURCHASE PLAN OCTOBER 25, 1933 TO FEBRUARY 1, 1934

1933—October	25	\$31.36	1933—November	10	\$33.20
	26	31.54		11	33.32
	27	31.76		13	33.45
	28	31.82		14	33.56
	30	31.96		20	33.66
	31	32.12		21	33.76
November	1	32.26		28	33.85
	2	32.36		29	33.93
	3	32.57	December	1	34.01
	4	32.67		18	34.06
	6	32.84	1934—January	16	34.45
	8	33.05	February	1	35.00
	9	33.15			

Source. *Federal Reserve Bulletin*, November, December, 1933; January, February, 1934. Only dates on which the official price was changed are given in this table.

Failure of the plan.—Before long it became clear that the Gold Purchase Plan was not going to effect the desired objective. The B. of L. S. all commodities index, which stood at 71 (1926=100) for September, remained at this figure during October, November and December, rising one point, to 72, in January 1934. The index for farm products stood at 56 in October, 57 in November, 56 in December and 59 in January. The index of commodities other than farm products and foods stood at 77 in October and November, and at 78 in December and January.

Protests by "sound money" advocates.—No sooner had the Gold Purchase Plan been put into operation than it aroused a storm of protest from sound money advocates throughout the country. The first of these protests, in point of time, was not directed against the Gold Purchase Plan specifically, since it was mailed to the President on the after-

noon of October 22, before the radio address in which the new plan was announced. It consisted of a letter, signed by forty-four of the leading students of currency problems throughout the country, which stated the belief of the signers that inflation of the currency would injure the nation and that recovery would be attained most quickly by a return to the gold standard.

In addition, other groups of experts protested the monetary policy of the Administration after the inauguration of the Gold Purchase Plan. These included a letter from twelve noted mid-western economists on November 2, and subsequent letters from economists at Yale, Columbia and other specific institutions. Leading Chambers of Commerce and other business and financial organizations added their protests to those of the experts.

Added weight was given to the objections of the sound money supporters by the resignation, on November 16, 1933, of Dr. O. M. W. Sprague, who had been persuaded to leave his position as economic advisor to the Bank of England to act as expert advisor to the President and Treasury. Dr. Sprague felt, in view of the unwise policy that the Administration was pursuing, that he could do more good by attempting to educate the public than by remaining in his official position.

The attitude of the President toward the appeals of the sound money adherents, as toward the counsels of Dr. Sprague, was one of complete indifference. It was clear from this attitude that President Roosevelt intended to carry through his monetary experiment in spite of the criticism and protests of a large majority of the country's leading experts. The failure of the commodity price level to respond at all promptly to the manipulation of the price of gold, however, led the President, in January 1934, to look favorably upon at least a temporary stabilization of the dollar on a gold basis. He had the power under the Inflation Act to devalue the dollar by any amount up to 50 per cent, but apparently preferred to share his responsibility in taking such a step with Congress. Moreover, he desired the nationalization of all of the monetary gold of the coun-

try, a procedure which required legislative sanction not contained in the Inflation Act. Accordingly, in response to the President's wishes, Congress passed the Gold Reserve Act of 1934, which became law on January 30.

DEVELOPMENTS IN 1934

Provisions of the Gold Reserve Act of 1934. — The Gold Reserve Act of 1934 vested the legal title to all gold held by the Federal Reserve banks or Federal Reserve Board (in their own right) in the United States Treasury. Since no monetary gold was legally held outside the Federal Reserve banks and Board at the time of passage of this act, this provision vested the title to all of the monetary gold of the country in the Treasury. The act further provided that in exchange for this gold the Reserve banks were to be given credits on the books of the Treasury or gold certificates. Then followed a series of amendments to the Federal Reserve Act in which the words "gold certificates" were substituted for the word "gold" wherever the latter appeared in connection with reserve requirements, security requirements, etc.

Section 3 of the act authorized the Secretary of the Treasury, with the approval of the President, to issue regulations prescribing the conditions "under which gold may be acquired and held, melted or treated, imported, exported, or earmarked: (a) for industrial, professional, and artistic use; (b) by the Federal Reserve banks for the purpose of settling international balances; and, (c) for such other purposes as in his judgment are not inconsistent with the purposes of this Act." Provision was made, further, for the confiscation by the United States of gold not legally held. No gold was to be coined by the mints except for the account of foreign countries, and the Treasury was required to hold its reserve against United States notes and Treasury notes of 1890, and its backing for gold certificates, in the form of gold bullion.

In the event of a reduction in the weight of the gold dollar, it was provided that the "profit" resulting from the devaluation should accrue to the Treasury, while, should the weight of the dollar be subsequently increased, the Treasury must stand the loss. The act gave the Secretary of the Treasury the power, with the President's approval, to buy

and sell gold, at home and abroad, with any direct obligations, coin, or currency of the United States, authorized by law, or with any funds in the Treasury not otherwise appropriated, at such rates and under such conditions as he deems to be in the public interest.

The act created a fund of \$2,000,000,000 out of the profit from devaluation, when available, to be used to stabilize the exchange value of the dollar, and authorized the Secretary of the Treasury to deal in gold and foreign exchange in administering this fund, which was given the title of a stabilization fund. Any profit in excess of \$2,000,000,000 resulting from devaluation was to be turned into the general fund of the Treasury. Such portion of the stabilization fund as was not needed for stabilizing the exchanges might be invested or reinvested in obligations of the United States in the open market.

The act amended the inflation Act of May 12, 1933, by authorizing the President to reduce the weight of the gold dollar by not less than 40 per cent and not more than 50 per cent. The President was also given the power to re-value the gold dollar, within the specified limits, from time to time if deemed expedient. This latter power, and the provision authorizing the operation of the stabilization fund, were limited to two years' duration unless the President should find it necessary, by reason of a continuance of the emergency, to extend them for an additional year.

The President was authorized, in his discretion, to reduce the weight of the silver dollar in proportion to the devaluation of the gold dollar, to reduce the weight of subsidiary silver coins, to cause silver certificates to be issued against silver bullion held by the Treasury, and, in the event of a return to bimetallism, to give silver certificates in exchange for silver bullion to holders or producers of silver.

Certain other miscellaneous provisions were contained in the act, but they are not especially pertinent to the present discussion and will not be enumerated.

The devaluation of the dollar.—Acting under the authority of the act of May 12, 1933, and the Gold Reserve Act of 1934, President Roosevelt, on January 31, 1934, by proclamation fixed the weight of the gold dollar at 15 5/21

grains nine-tenths fine. This was a reduction of 40.94 per cent in the gold content of the dollar, the new dollar containing 59.06 per cent of 25.8 grains nine-tenths fine. The price of gold was thus fixed at \$35.00 per ounce. Following the proclamation fixing the new weight of gold in the dollar, Secretary of the Treasury Morgenthau, as authorized by the law, issued a series of regulations regarding the purchase and sale of gold by the mints and the purposes for which gold might be used and 'or obtained by purchase from the mints.

Under these regulations gold could be obtained or held in limited quantities for use in the arts, the professions and industry without a license, and in larger amounts with a license. The Federal Reserve banks were given permission to redeem gold certificates in gold bullion, in such amounts as the Secretary of the Treasury should deem necessary, to settle international balances or to maintain the parity of moneys of the United States with gold. Gold also might be obtained for certain other purposes not inconsistent with the intent of the law. The mints were authorized to purchase gold legally offered at \$35.00 per fine ounce less $\frac{1}{4}$ of 1 per cent and mint charges, and to sell gold, as permitted under the regulations, at \$35.00 per fine ounce plus $\frac{1}{4}$ of 1 per cent.

It was frequently stated, at the time these regulations were put into effect, that the United States had adopted a gold bullion standard. This statement is not precisely correct. The requirements of the gold bullion standard are that gold be freely purchased in exchange for currency in unlimited quantities at a fixed price and that gold bullion be sold for currency at the same price to anyone wishing to obtain gold without regard to the use to which the gold so purchased may be put. It is improper to designate as a gold bullion standard an arrangement which permits the President to vary the gold content of the dollar within fairly wide limits from time to time and which allows the Secretary of the Treasury, with the President's approval, to restrict, by regulation, the purchase, sale and use of gold bullion. The most that can be said is that the regulations described above placed the country for the time being on a sort of qualified or limited gold bullion standard.

Purposes of devaluation. — Devaluation is an ancient device used by monarchs in the early days to supplement the revenue received through taxation and other accepted channels. By reducing the weight of gold or silver in the coins coming into the exchequer, and paying out coins of the same nominal value, but of smaller fine metallic content, the king was enabled to pay out a larger number of units of money than he had taken in, the extent of his profit depending upon the degree to which he was willing to debase his coinage.

In modern times, however, although the profit from devaluation may be thankfully accepted by the government, the process of reducing the fine metallic content of the money unit is not engaged in primarily for the purpose of obtaining such ill-gotten gains. In fact, the chief instances of devaluation in comparatively recent years, prior to the action of the United States just described, have been among European countries which, having inflated their currencies during the Great War, were forced to decrease the weight of their monetary units in order to make a return to the gold standard possible.

The situation in the United States differed materially from that existing in these countries of Europe. Prices had fallen rather than risen, bank reserves were more than adequate, and there was certainly no necessity for adjusting the gold content of the dollar to a higher price level or to an excessive amount of outstanding currency. Under the circumstances, two possible aims of devaluation were discernible. One was the revival of our export trade, since a reduction in the gold value of the dollar, unaccompanied by a corresponding rise in export prices, would offer at least a temporary stimulation to exports. The other was the hope that, by some process of legerdemain, the reduction in the weight of the gold dollar would effect a corresponding increase in the level of commodity prices.

From the utterances and writings of President Roosevelt since May 1933, it seems unquestionably to be the case that the object of the Administration in devaluing the dollar was to bring about a rise of substantial proportions in the commodity price level. In May, July and October, the President had voiced the purpose of the government in this regard

in clear and concise terms. Moreover, Mr. Roosevelt's chief monetary advisor, Professor Warren, was known to believe that "by reducing the weight of gold in the dollar, any desired price level can be established."⁶ In view of these facts, the conclusion that devaluation was resorted to as a price-raising device is unmistakable.

The results of devaluation.—If it was hoped that the process of devaluation would result in a prompt and approximately proportionate rise in the commodity price level, the results in the first five months following the President's proclamation of January 31, 1934, were decidedly disappointing. The B. of L. S. index, which stood at 72 in January 1934, had reached 74.8 only by the week of June 30. Moody's daily index of staple commodity prices, on the other hand, rose from a 1934 low of 126 on January 2 to 136.1 on June 1 and by the end of June had advanced to 140.4. As a measure of the general commodity price level, however, the B. of L. S. index is superior to Moody's and the results of devaluation in lifting prices, as measured by the former index, were negligible. Moreover, a part of the increase in the first half of 1934 was clearly the result of higher grain prices, brought about by the drought. To the extent that the increase arose from this source, it would have occurred whether the dollar had been devalued or not.

From the middle of 1934 to April 1937, the B. of L. S. index rose irregularly to a high point of 88. Thereafter it declined to 75 in August 1939, recovered somewhat in the latter months of that year and reached 80 in December 1940. The first six years of the devalued dollar, therefore, did not indicate any great success in restoring commodity prices to the pre-depression level.

Gold policy in 1934.—Following the official devaluation of the dollar at the end of January 1934, the Administration, for the most part, followed a *laissez faire* policy with respect to gold during the remainder of the year. The dollar was substantially undervalued in relation to foreign currencies, and large imports of gold into the United States resulted. Imports were heaviest in the two months following the de-

⁶ Quoted from Warren and Pearson, *Prices*, by W. E. Spahr in *The Monetary Theories of Warren and Pearson*, p. 3.

valuation⁷ but continued throughout the year with the exception of one month when a step in the Administration's silver program led to a weakening of the dollar and a small net export of gold. From February to December inclusive, net gold imports, in terms of the devalued dollar, totaled \$1,133,912,000, bringing the country's gold stock up to a record high figure, even in terms of the old gold dollar.

Aside from a presumable occasional use of the stabilization fund to steady the foreign exchange position of the dollar, the chief action taken by the Treasury in the course of the year was the regulation of November 12, which lifted the restrictions theretofore imposed on transactions in foreign exchange other than the export of gold or gold certificates. This was generally hailed as a move toward sound money and did, without question, place the country more nearly on a gold bullion standard than had previously been the case.

Renewal of sound money agitation.—In the closing months of 1934, a pronounced renewal of the agitation for a return to a full gold standard took place. The Federal Advisory Council, the American Management Association, the National Association of Manufacturers, the Chamber of Commerce of the State of New York, and others drew up statements or resolutions of varying forcefulness advocating a restoration of the gold standard in the United States. As in the past, these pronouncements received little or no recognition at Washington, but were significant as an indication of the desire, on the part of important business groups, for a definite stabilization of the dollar on a fixed gold basis.

DEVELOPMENTS IN 1935

The gold clause cases.—The outstanding event of the year 1935, with respect to the Administration's monetary policy, was the decision of the Supreme Court in the Gold Clause Cases. The decision was of the highest importance since it determined the constitutionality of the Resolution of June 5, 1933, which abrogated the gold clause in public and private contracts.

Four separate cases were included in this group. Two

⁷ Net imports of gold for February and March amounted to \$689,907,000 at the new par. *Federal Reserve Bulletin*, April 1935, p. 227.

were by holders of railroad bonds bearing the gold clause. One was by the owner of a Liberty bond. In the fourth case, the plaintiff was the former holder of a certain sum in gold certificates which he was required to turn in in exchange for other forms of money. The arguments presented by counsel for the plaintiffs were based on the principle of the sanctity of contracts. Since the bonds or certificates contracted to pay the holders in gold coin of the former weight and fineness, and since gold was not obtainable under the government policy, it was claimed that the holders of these obligations were entitled to \$1.69 in legal tender currency for each dollar face value of the obligations held.

It was clear that the decision of the court would be of vital importance. Should the court decide in favor of the plaintiff in every instance, it would mean either that debts totaling around \$100,000,000,000, bearing the gold clause, would require the payment of \$169,000,000,000 by the debtors, or that the government would have to revalue the dollar upward to its former weight in order to avoid this contingency. If, on the other hand, the court found the abrogation of the gold clause constitutional in respect to private contracts, but illegal on government bonds, it would still mean the payment of \$1.69 per \$1.00 by the government on some billions of its obligations containing the gold clause. This would have meant an increase in the burden of the Federal debt alone of roughly \$10,000,000,000, an outcome which naturally did not appeal to the Administration.

The Supreme Court began its hearings in the gold cases on January 8, 1935, and rendered its decision on February 18, two weeks later than had been anticipated. During the early part of the hearings little attention was paid to the cases by the financial community. As time went on, however, the development of a critical attitude on the part of a number of the justices toward the evidence of the government's counsel aroused the apprehension of the Administration and others of the likelihood of an adverse ruling by the court. These apprehensions were not greatly assuaged by a postponement of the decision by the court on two successive

weeks, for this clearly indicated the difficulty which the court was experiencing in arriving at an opinion.

Accordingly, for about a month before the decision was finally rendered, the gold cases were much in the public eye. Financial markets were unsettled. The foreign exchange market was disrupted with large takings of gold abroad for importation into the United States before a decision was arrived at. Legal advisors of the Administration were at work devising ways and means of circumventing a possible adverse decision by the court.

There was much discussion of what the effects of a decision adverse to the government would be. Obviously, to require the payment of \$1.69 per \$1.00 of gold clause indebtedness would prove ruinous. Economically it would have been possible to meet the contingency with a minimum of disturbance by a revaluation of the dollar upward to the old weight.⁸ This was even suggested by certain Treasury experts, but was not acceptable to the Administration, which preferred to escape the effects of an adverse decision by more devious means, even to amending the constitution if necessary.

As it turned out, the decision was a victory for the government, although it is difficult to see how the Administration could have derived much spiritual satisfaction from it. With regard to private debts the court ruled that to uphold the gold clause would be to allow private contracts to interfere with the government's constitutional power to regulate the value of money. The resolution of June 5, 1933, was accordingly upheld in respect to private contracts.

In the case of the government's own obligations containing the gold clause, all nine of the justices concurred in holding the resolution of June 5, 1933 unconstitutional. Nevertheless the court, although divided on this point, refused to award damages on the ground that the "plaintiff has not shown or attempted to show that in relation to buying power he has sustained any loss whatsoever." As regards the holder of gold certificates, the court maintained that, had he

⁸ In this connection, see an excellent editorial by D. W. Ellsworth, *The Analyst*, January 18, 1935.

obtained the gold, it could legally have been neither exported nor used in any way worth more to him than paper money would be. Consequently, it refused to award damages on the ground that no loss had been shown.

The decision was rendered by a 5 to 4 vote, the dissenting opinion opposing that of the majority in every particular except as regarded the unconstitutionality of the government's repudiation of its own contracts. Associate Justice McReynolds, delivering an impromptu summary of the dissenting opinion, bitterly attacked the majority opinion in a scathing philippic from the bench.

It is not yet possible to appraise fully the ultimate future effects of this decision. By bringing in the concept of "buying power" the court departed from all precedent, and, incidentally, left the way open for future suits against the government in cases where a loss of buying or purchasing power could be demonstrated. Because of this, at the recommendation of the President, Congress closed the Court of Claims to suits of this sort by a Joint Resolution, approved August 27, 1935.

Subsequent developments.—The effect of the decision in the gold cases was to relieve the Administration of further immediate worry regarding its monetary arrangements. Some of the zealous Congressional inflationists, instead of taking the decision as a well-merited rebuke, seemed to feel that it gave the government *carte blanche* to devalue the dollar further and proposed such a step. The Administration, however, was apparently not agreeable to further tinkering in this direction for it continued to maintain the existing status of the dollar.

In March, the pound sterling developed a sudden weakness, thus placing an added strain on the gold bloc countries which up to this time had been able to maintain the gold value of their monetary units in accord with their joint declaration in the summer of 1933. In this month a crisis developed in Belgium which was finally forced to devalue the belga by about 27 per cent after a valiant but ineffectual struggle. Italy and Poland also had earlier been forced to adopt systems of exchange control, but the remaining gold bloc countries, although subject to some added strain as a

result of Belgium's action, were enabled to maintain their previous status until the fall of 1936.

In the summer of 1936, France was subjected to recurring crises involving large gold losses and finally, on September 25, the Blum Government in France let it be known that it would ask Parliament to devalue the franc between certain limits, averaging about 30 per cent. Simultaneously, it was announced in Paris, London and Washington that the Governments of France, Great Britain and the United States agreed in the interests of peace and international relations that the greatest possible stability in the currencies of the three countries should be maintained and that they would use all appropriate and available resources to that end.

In order to make this agreement effective it was necessary to arrange some method of shipping gold between the countries concerned. Accordingly, on October 12, Secretary of the Treasury Morgenthau issued a supplementary announcement to the effect "that (hereafter, and until, on twenty-four hours notice, this statement of intention may be revoked or altered) the United States will . . . sell gold for immediate export to, or earmark for the account of, the exchange equalization or stabilization funds of those countries whose funds likewise are offering to sell gold to the United States, provided such offerings of gold are at such rates and upon such terms and conditions as the Secretary may deem most advantageous to the public interest."

The price set for the sale of gold was the existing price of \$35.00 per ounce plus $\frac{1}{4}$ per cent handling charges, although it was emphasized by the Secretary that this price was subject to change upon twenty-four hours notice if deemed necessary to the public interest. The countries originally included in the agreement were France, Great Britain and the United States, but, on November 24, the Treasury announced that Belgium, Switzerland and The Netherlands had signified their willingness to comply with the agreement and were added to the list.

The action of France, which was followed by Switzerland and some other countries, marked the end of the gold bloc. Nevertheless, the agreements just described made a beginning toward international monetary stabilization and they un-

doubtedly made possible the revaluation of the gold bloc currencies with less disturbance than would otherwise have occurred. In spite of doubts regarding certain aspects of the agreements there was cause for hope that they might mark the beginning of a movement toward the restoration of a workable international gold standard. The outbreak of war in Europe in September 1939, however, blasted any such hope. The belligerent countries departed from any semblance of a gold standard and the possibility of its restitution internationally is at present rather remote.

Domestically the situation remained substantially unchanged after the entry of the United States into the tripartite agreement. In December 1936, shortly after the agreement was consummated, the Treasury undertook to sterilize gold imports in order to assist the Board of Governors of the Federal Reserve System in preventing too great an increase in the excess reserves of member banks. A recession in business brought about the abandonment of this policy in the spring of 1938. The sterilized gold in the inactive fund was desterilized and no attempt has since been made to keep incoming gold from adding to bank reserves.

On January 19, 1936, the President, by proclamation, extended the life of the stabilization fund and his right to devalue the dollar to 50 per cent of its old weight to January 30, 1937, on the ground that the emergency in international exchange still existed. On January 19, 1937, Congress extended these two provisions to June 30, 1939. Again, on July 6, 1939, in the face of intense opposition in Congress, the Administration forced through a bill, several days late, extending these powers, once again, to June 30, 1941.

THE ADMINISTRATION'S SILVER PROGRAM

The World Economic Conference agreement.—In this period of monetary experimentation under the Roosevelt Administration, the silver interests have not been lacking in attempting to obtain legislation which would, in the current phrase, "do something for silver." The silver provisions of the Inflation Act and the Gold Reserve Act of 1934 have been set forth in earlier pages and need not be repeated.

One of the minor accomplishments of the World Economic Conference had been the negotiation of an agreement among the sixty-six participating nations to the effect that these governments would abandon the policy of melting or debasing silver coins below a fineness of .800, and would substitute silver coins for low value paper currency when and if conditions should permit. Moreover, the United States entered into a supplemental agreement between the chief users and chief producers of silver under which the five major producing countries agreed to absorb and keep off the market, for a period of four years, silver in the amount of 35,000,000 ounces, of which the share allotted to the United States was 24,421,410 ounces. The silver-using countries, on the other hand, agreed not to dispose of more than certain limited amounts of silver annually during the period in question.

In spite of the provisions of the Inflation Act and the conference agreement, no action affecting silver was taken by the president until the end of the year. On December 21, 1933, by proclamation, Mr. Roosevelt authorized the mints to accept for coinage into silver dollars domestically produced silver. The mints were to levy a seigniorage charge of 50 per cent; that is, one-half of the silver presented at the mints was to be coined into dollars and returned to those offering the silver for coinage. The other half was to be retained by the Treasury. This meant that for each ounce of silver presented at the mint for coinage, the party presenting the silver would receive legal tender silver coin having a value of \$0.64½. In other words, the proclamation fixed the domestic price of silver at 64½ cents per ounce. Since this was well in excess of the market value of silver at the time, the result of the proclamation was to furnish a subsidy of substantial amount to the silver interests.

The Silver Purchase Act of 1934.—Those intent on doing something for silver were not, apparently, satisfied with the proclamation of December 21, 1933. Several different silver bills were introduced into Congress in the spring of 1934, but did not meet with the approval of the President. Finally, however, Mr. Roosevelt was either won over by the silver supporters or capitulated to their

pressure, and, on June 19, 1934, he approved the Silver Purchase Act of 1934.

The act authorized and directed the Secretary of the Treasury to buy silver at home and abroad at such times, rates and terms as he deems to be in the public interest, except that such purchases were not to be made at a price higher than the monetary value and at not more than fifty cents per ounce for silver in the United States. The Secretary of the Treasury was also authorized to sell silver, with the approval of the President, whenever the market price exceeds the monetary value, or whenever the government's stock of silver exceeds 25 per cent of the total monetary stock of gold and silver. Silver might not be sold, however, if such sales would reduce the security required behind silver certificates. The act also authorized and directed the Secretary of the Treasury to issue silver certificates, the face value of the certificates to be not less than the cost of all of the silver bought under the act. Silver certificates were made legal tender and redeemable on demand in silver dollars.

The remaining provisions gave the government control over the acquisition, importation, exportation or transportation of silver under certain circumstances, and authorized the President to combat silver hoarding by requiring the delivery of silver to the mints, regardless of ownership and location of the silver. A transfer tax on refined silver in bullion form was also provided under the terms of the act.

Treasury operations in silver. — After the passage of the Silver Purchase Act, the Administration began to buy some silver in accordance with its provisions. There was little public notice of the operation of the law, however, until August 9, 1934, on which date the President, as authorized by the act, took steps to nationalize silver. By executive order he required the delivery to the Treasury, within a ninety-day period, of all silver situated in the United States on the date in question at a price of 50.01 cents per fine ounce. The order did not apply to foreign or domestic coins, newly-mined domestic silver, or manufactured silver articles, but was designed rather to acquire the stock of silver held by speculators in this country.

This action appeared inflationary to the financial com-

munity. The dollar weakened in the foreign exchange market, some gold was exported to foreign countries, and prices of government bonds broke badly, although they subsequently recovered.

Later in the year the Treasury pushed its silver purchases abroad actively with the result that China suffered acute embarrassment through the loss of silver from her reserves to the United States. The Chinese government appealed to the United States to desist in her silver purchases, but Secretary of State Hull replied to the effect that the law was mandatory and, consequently, that it was not possible to refrain from further purchases.⁹ As a result of this attitude on the part of the United States, China was forced to establish a customs tax on exports of silver plus an equalization charge to cover any discrepancy between the parity on London silver and the rate of exchange fixed by the Central Bank of China. This proved ineffective, however, and in November 1935, China was finally forced to abandon the silver standard.

The result of the Administration's silver policy up to the end of 1934 was to increase the government's holdings of silver by approximately 317,400,000 ounces, which represented 21,400,000 ounces of domestic production, bought at 64.5 cents per ounce; 111,000,000 ounces of nationalized silver stocks, bought at 50.01 cents per ounce; and 185,000,000 ounces of open market purchased at varying prices.¹⁰

Handy & Harman estimate that government stocks of silver at the close of 1934 totaled 1,003,000,000 ounces. Gold holdings at the end of the year amounted to \$8,230,000,000. Since the Silver Purchase Act contemplates the acquisition of silver by the government with a coinage value equal to one-third of the monetary gold stock, the amount of silver necessary to fulfill the requirements of the law at the close of 1934 was 2,125,000,000 ounces.¹¹ Consequently, at that date, the Administration was faced with the

⁹ Since the act directs the purchase of silver by the Secretary of the Treasury at such times, rates and terms as he deems to be in the public interest, this reply hardly seems well founded.

¹⁰ These estimates are from Handy & Harman's *Annual Review of the Silver Market* for 1934.

¹¹ *Ibid.*, p. 43.

necessity of acquiring over 1,000,000,000 ounces of silver, in addition to existing holdings, to comply with the provisions of the law.

Purchases of silver were continued in 1935 and, by early April, the world price of silver had climbed nearly to 64.5 cents, the price at which the Treasury had been purchasing newly mined silver from domestic producers. Accordingly, on April 10, 1935, the President increased the Treasury price of domestic silver to 71.11 cents per ounce by reducing the seigniorage charge from 50 to 45 per cent. Speculation soon sent the world price of silver above this figure and again, on April 23, the Treasury price was lifted, to 77.57 cents per ounce. Again speculative forces boosted the price of silver to above 80 cents, but the Treasury refused to raise its price further and the price of silver in the outside market thereupon receded below that fixed by the Treasury. Although the price of silver had fallen to around 45 cents by the end of the year and remained close to that figure during 1936, the Treasury continued to buy silver from domestic producers at the 77.57-cent figure which had been set on April 23, 1935.

On December 31, 1937, at the expiration of the eight-nation pact relative to the purchase and sale of silver, the President, by proclamation, continued purchases of domestically mined silver, but reduced the price from 77.57 cents to 64.64 cents per ounce. This price remained in force until the passage of the act of July 6, 1939 — referred to above — which, by statute, required the payment of 71.11 cents per ounce for domestic silver. The act of July 6th did not amend the Silver Purchase Act, so that foreign silver continued to be subject to purchase by the Treasury.

Since 1934, then, the Treasury has purchased both foreign and domestic silver continuously. The results of the purchase program up to the close of 1940 are summarized so clearly and concisely by Handy & Harmon in their 25th Annual Review of the Silver Market for 1940 that we shall quote the following paragraphs which cannot be improved upon :

We estimate United States Government acquisitions during 1940 at 203,100,000 ounces, the smallest annual total since the silver buying

program was undertaken seven years ago. Of this amount 67,100,000 ounces were derived from domestic ores, and the balance of 136,000,000 ounces represented foreign silver purchased under inter-government agreements and in the open market, plus some 780,000 ounces received in miscellaneous deposits at the mints and assay offices. Our estimate of Treasury silver holdings at December 31st, 1940, is 3,135,000,000 ounces, being the sum of the holdings on hand at the beginning of 1940 plus the 203,100,000 ounces acquired during the year.

The enormous additions to the gold stocks of the United States have prevented any progress for the year towards meeting the provision of the Silver Purchase Act that "one-fourth of the total monetary value of the gold and silver stocks shall be in silver." The percentage of silver to the total has declined during 1940 from about 18% to 15½%, and, even if not another dollar's worth of gold were added to the twenty-two billion now on hand, it will be necessary to purchase a further 2,535,000,000 ounces of silver in order to reach the goal set by the Act.¹²

The utter futility of the Silver Purchase Act of 1934 is only too apparent. Its chief accomplishments have been to drive China from the silver standard and to dilute the money of the United States with a mass of unwanted and unneeded short-weight silver which may easily in the future prove to be a source of embarrassment and danger to the stability of our monetary system.

Conclusion. — We have now traced briefly the evolution of the American monetary system, with particular emphasis on the extraordinary developments of the Roosevelt Administration. The monetary program followed since 1932 has been so unorthodox and of such wide public interest that a critical examination of its various aspects is highly important. It is impossible, however, intelligently to understand such an analysis until the principles governing the value of money, central banking policy, etc., have been treated in some detail. We shall therefore postpone an analysis of these policies until a later point and turn our attention, in the chapters which follow, to a consideration of the nature and development of commercial banking.

¹² Pp. 8-9.

REFERENCES

- Ayers, L. P. *The Economics of Recovery*. New York. 1933.
Carothers, N. *Silver in America*. Chicago. 1936.
Collins, E. H. *Inflation and Your Money*. New York. 1933.
Crawford, A. W. *Monetary Management Under the New Deal*. Washington. 1940.
Hardy, C. O. *Devaluation*. Chicago. 1933.
Palyi, M. *Monetary Chaos and the Gold Standard*. Chicago. 1934.
Paris, J. D. *Monetary Policies of the United States, 1932-1938*. New York, 1938.
Pavolsky, L. *Current Monetary Issues*. Washington. 1933.
Reed, H. L. *The Commodity Dollar*. New York. 1934.
Spahr, W. E. *The Monetary Theories of Warren and Pearson*. New York. 1934.
Sprague, O. M. W. *Recovery and Common Sense*. Boston and New York, 1934.
Warburg, J. P. *The Money Muddle*. New York. 1934.
Warren, G. F. and Pearson, F. A. *Gold and Prices*. New York. 1935.
Westerfield, R. B. *Our Silver Debacle*. New York. 1936.
Federal Reserve Bulletin.

CHAPTER V

THE NATURE AND FUNCTIONS OF COMMERCIAL BANKING

Introduction. — It is impossible to get at the roots of the problem of money without a clear understanding of the banking process, and vice versa. In fact, money and banking are closely associated, for banks not only handle and deal in money, but they perform important monetary functions as well through the issuance of bank notes and the creation of the check or deposit currency. Consequently, before proceeding to attack the complexities surrounding the question of the value of money and monetary policy, it will be essential to become familiar with the nature and functions of commercial banking and the part played by this mechanism in the economic system.

THE NATURE OF COMMERCIAL BANKING

Term loosely used. — The term *banking* is loosely used to mean almost any sort of financial activity, and it is true that the large modern bank of the department-store type, commonly referred to as a commercial bank, with its commercial, savings, trust, safe-deposit and investment departments lends support to such a usage. It is also true that the work of these various departments is closely related and may therefore conveniently be carried on by a single institution. Nevertheless, the business of most of the different departments is not properly to be included under the head of commercial banking, while certain other functions are incidental to the conduct of a commercial banking business.

A definition of commercial banking. — In order to draw a clear distinction between commercial banking functions and other functions frequently performed by banks which fall outside this category, we may define commercial banking as *the process of pooling and lending or investing the temporary*

surplus funds of the community, together with those functions which are incidental but essential to the fulfillment of that process. It is in the course of this process that the check currency and bank note issues are created. At the present time, the issuance of bank notes has been relegated almost entirely to special institutions, known as central banks, while the bulk of the check currency, in countries having highly developed check systems, is created by the individual commercial banks of the system. Before considering these two important types of money in detail, however, it will be advisable to analyze the banking process from the banker's standpoint and become familiar with the more important technical details of the business.

The instruments of commercial banking. — At the outset, before describing the banking process itself, it will be advisable to become familiar with the negotiable instruments connected with that process and with certain details regarding their use.

The instruments in question fall into two classes, bills of exchange and promissory notes. A bill of exchange, according to the Uniform Negotiable Instruments Law, is "an unconditional order in writing addressed by one person to another, requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time a sum certain in money to order or to bearer." The use of the word "person" in this connection is interpreted to mean an individual, an individual proprietorship, a partnership, a corporation, or a bank.

A promissory note, on the other hand, is defined as "an unconditional promise in writing made by one person to another signed by the maker engaging to pay on demand or at a fixed or determinable future time a sum certain in money to order or to bearer." The word "person" here has the same interpretation as in the case of the bill of exchange.

The difference between the two classes of instruments is clear from their definitions. The bill of exchange is an order drawn by the creditor on his debtor. The promissory note is a promise to pay the creditor given by the debtor. In the case of the bill of exchange, the party who gives the order is known as the *drawer*, the party on whom the order

is drawn is the *drawee*, and the party to whom payment is to be made, whether the drawer or some third person, is the *payee*.

Most familiar to the layman among the instruments of commercial banking is the personal check (Fig. 1). The

BETHLEHEM NATIONAL BANK 60-256
 BETHLEHEM, PA., _____ 19__ No. _____
 PAY TO THE ORDER OF _____ \$ _____
 _____ DOLLARS
 SPECIMEN

FIG. 1. PERSONAL CHECK

check is an order, drawn by a bank depositor on his bank, requiring the bank to pay a definite sum to bearer or to the order of some specified third party on demand. It thus falls into the class of bills of exchange. The depositor is the drawer, the bank is the drawee, and the party to whose order the check is drawn is the payee.

BETHLEHEM NATIONAL BANK 60-256
 BETHLEHEM, PA., _____ 19__ No. _____
 PAY TO THE ORDER OF _____ \$ _____
 _____ DOLLARS
 CERTIFIED
 PAYABLE AS ORDER ONLY DRAWN WHEN PROPERLY ENDORSED
 BETHLEHEM NATIONAL BANK
 BETHLEHEM, PA.
 JAN 15 1941
 DO NOT DESTROY THIS CHECK
 SPECIMEN

FIG. 2. CERTIFIED CHECK

Certain other types of check in common use in commercial banking should be noted. Among these is what is known as a certified check (Fig. 2). A certified check is merely a personal check with the word "certified" stamped or printed, and the signature of the proper official of the drawee bank

written across its face. This gives the guarantee of the bank that the check is covered by the drawer's deposit and that it will be paid upon presentation. In order to protect itself during the interval between the certification of the check and its presentation for payment, the bank immediately debits the account of the drawer by the amount of the check and credits

Bethlehem National Bank
60-256
No. _____
BETHLEHEM, PA. _____
Pay to the order of _____
_____ DOLLARS
CASHIER'S CHECK
_____ CASHIER

FIG. 3. CASHIER'S CHECK

BETHLEHEM NATIONAL BANK
60-256
Bethlehem, Pa. _____ No. 6899
Pay to the Order of _____

To CHASE NATIONAL BANK
1-74 New York City
_____ CASHIER

FIG. 4. BANK DRAFT

an account called "certified checks outstanding" by a like amount, thus segregating sufficient funds to pay the check when it is presented.

Another type of instrument which differs somewhat from either the ordinary or certified check is what is variously known as a treasurer's, officer's, or cashier's check (Fig. 3). Such a check is one which is drawn on a bank by its treasurer,

cashier or other authorized officer, directing the bank to pay to the order of a designated party a certain sum of money on demand. Such a check, once issued, becomes a direct liability of the bank to pay the specified amount when the check is presented, and a separate liability account—officer's checks outstanding—is maintained for such items by the bank issuing the check.

Finally, among these related items, is the bank draft (Fig. 4). A bank draft is merely a check drawn by the treasurer, or other authorized officer, of one bank upon another bank in which the former institution maintains a deposit account. When the draft is drawn upon a bank in New York City it is known as a *New York draft*, and the buyer is said to be purchasing New York funds or New York exchange, since the draft is drawn upon, and hence payable by, a bank in that city.

Other instruments of commercial credit arise out of the dealings between the bank and its borrowing customers. Foremost among these, in American banking, is the promissory note (Fig. 5). This is a promise to pay to the bank

\$	_____	_____ 19
	_____ after date _____	_____ promise to pay
To the order of _____		_____ Dollars
at Guaranty Trust Company of New York, 140 Broadway, New York City		
Value received _____		

FIG. 5. PROMISSORY NOTE

given by the borrower and may be "on demand" although usually a definite date of payment is specified. Such notes are generally made payable to the order of the maker and, when indorsed by him, become collectible by the bank at maturity. When the note bears only the maker's name it is known as single-name paper, but, if indorsed by a second party, it is called double-name paper.

Form of Trade Acceptance recommended by the American Acceptance Council

TRADE ACCEPTANCE <small>STANDARD FORM APPROVED BY THE AMERICAN ACCEPTANCE COUNCIL NEW YORK</small>			
No. _____		19 _____	
ON _____		PAY TO THE ORDER OF OURSELVES	
<small>(DATE OF MATURITY)</small>		<small>(CITY OF DRAWER)</small>	
THE TRANSACTION WHICH GIVES RISE TO THIS INSTRUMENT IS THE PURCHASE OF GOODS BY THE ACCEPTOR FROM THE DRAWER. THE DRAWEE MAY ACCEPT THIS BILL PAYABLE AT ANY BANK, BANKER OR TRUST COMPANY IN THE UNITED STATES WHICH SUCH DRAWEE MAY DESIGNATE.		<small>(CITY)</small>	
TO _____		DOLLARS (\$ _____)	
<small>(NAME OF DRAWER)</small>		<small>(SIGNATURE OF DRAWER)</small>	
<small>(STREET ADDRESS)</small>		BY _____	
<small>(CITY OF DRAWER)</small>		<small>(SIGNATURE OF DRAWER)</small>	
DATE _____		LOCATION OF BANK _____	
PAYABLE AT _____		<small>(SIGNATURE OF ACCEPTOR)</small>	
<small>(NAME OF BANK)</small>		BY _____	
ACCEPTED		<small>(SIGNATURE OF DRAWER)</small>	

Fig. 6. TRADE ACCEPTANCE
(Courtesy of American Acceptance Council)

Two other types of instrument remain to be considered. They are the trade acceptance (Fig. 6) and the bank acceptance (Fig. 7). The trade acceptance may be defined as a

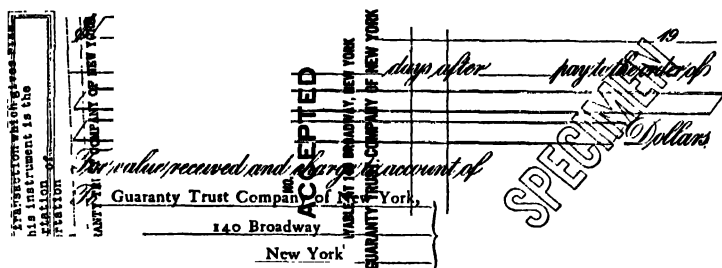


FIG. 7. BANK ACCEPTANCE

time draft or bill of exchange¹ drawn by the seller of goods (the drawer) on the buyer of goods (the drawee) ordering the latter to pay the amount of the draft at a fixed or determinable future date, and accepted by the buyer. The word "accepted" is printed, stamped or written across the face of the instrument and, when signed by the buyer, makes the latter primarily responsible for the payment of the acceptance at maturity. If the seller of goods holds accepted drafts and wishes to borrow from his bank, he can indorse these acceptances and obtain the needed funds by discounting them at the bank.

A bank acceptance differs from a trade acceptance in that it is drawn—usually by the seller of goods—on a bank instead of on the individual buyer and is accepted by the bank. The bank, in accepting such a draft or bill, becomes fully and primarily liable to pay it at maturity. The bank acceptance is used largely, although not entirely, in connection with the financing of foreign shipments and will be considered more fully in a later connection (Chapter XV).

Negotiability and indorsement.—Practically all of the short term instruments which arise out of the commercial banking process are what are known as negotiable instruments. The legal aspects of negotiability are too extended to be treated here. We shall be content with the broad definition of negotiability which is transferability by indorsement, the

¹ The terms "draft" and "bill of exchange" are used interchangeably.

party to whom the instrument is transferred (known as the transferee) receiving the right to sue in his own name.² The strict negotiability of the instruments of commercial credit also gives the transferee certain additional legal rights, but we shall not be concerned with these here.

Since the transfer of negotiable instruments from one party to another requires the indorsement of these instruments, it will perhaps be worth while to examine the different types of indorsement and indicate the legal effect of each type on the instrument in question. Indorsements fall into five classes or types which may be listed as follows: (a) blank, (b) special, (c) restrictive, (d) qualified, and (e) conditional. These are illustrated in Figure 8.

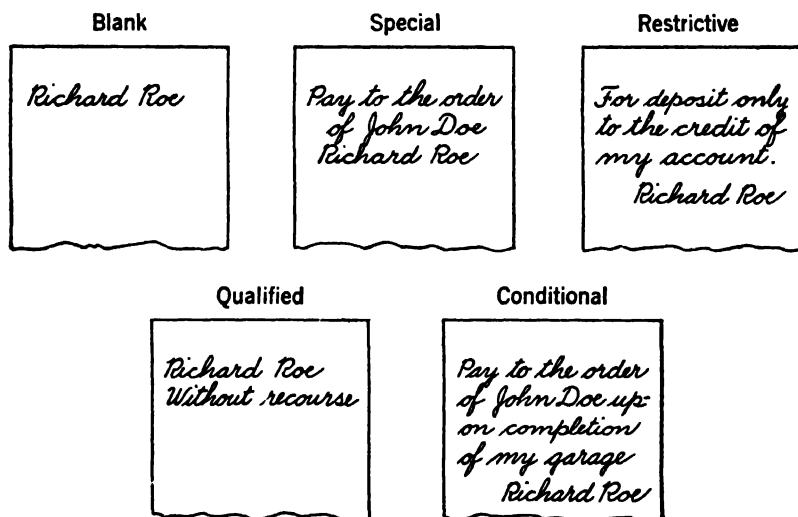


FIG. 8. TYPES OF INDORSEMENT

An indorsement in blank occurs when the transferee merely writes his name across the back of the instrument. An instrument which has been indorsed in blank may be transferred from one party to another without further indorsement and without destroying in any way the legal rights of the holder. A special indorsement is one in which the indorser specifies the party to whose order payment is to be made. That party then must in turn indorse the instrument before it can be

² For an excellent discussion on negotiability in relatively concise form, see A. C. Whittaker, *Foreign Exchange*, Chapter II.

further transferred. A restrictive indorsement forbids payment to anyone other than the party specified. Such an indorsement obviously destroys further negotiability of the instrument. A qualified indorsement is one in which the indorser writes the words "without recourse" beneath his signature. This has the effect of relieving him from any liability to pay the instrument in the event that the party primarily liable fails to pay at maturity. A conditional indorsement makes the payment of the instrument contingent on some act or event which is to take place on some uncertain date in the future. Such an indorsement is of little importance for our purposes. Again, clearly, a conditional indorsement destroys the negotiability of the instrument, at least for the time being.

The banking process.—Having considered the nature and more obvious legal aspects of the instruments of commercial credit we may now turn our attention to an outline of the banking process. This process consists, in accordance with our definition, in the pooling of temporary surplus funds by the banks through their receipt of deposits and the utilization of these funds. The issuance of bank notes was also formerly a part of this process, but since note issues have almost universally been relegated exclusively to the central banks, we shall not consider such issues in the present connection.

Deposits.—Commercial bank deposits may be made in the form of cash (i.e., hand-to-hand money) or of checks or drafts of the type indicated in a foregoing section of the chapter. Such deposits may be made by individuals, firms, corporations, various institutions (such as churches, clubs, universities, etc.), other banks, and governmental units. Certified and officers' checks outstanding and cash letters of credit are also included under the head of demand deposits in the commercial banking condition reports. The institutions commonly known as commercial banks also receive savings deposits, but since the pooling of such funds is not a part of the commercial banking function, we shall not consider savings deposits in the present connection.

It may also be claimed with some force that banks create demand deposits by crediting the accounts of borrowing

customers by the amounts borrowed. This is true for the system of banks and is an important social function of the commercial banking process. As we shall see later, however, (Chapter XVII) this applies only temporarily to the individual bank, which loses such created deposits almost at once to other banks in the system.

Bills payable and rediscounts.—Although the chief source of a bank's funds are its deposits, it may at times find it necessary or desirable to augment these funds by borrowing from the central bank or from some other bank in the system. When this is done, the borrowing bank of course becomes liable for the repayment of the amounts borrowed at some future date, and this liability appears on the bank statement under the head of "bills payable and rediscounts." The term "bills payable" is customarily used in this country in spite of the fact that the bank obtaining the funds more frequently borrows on its own promissory note than on a bill of exchange.

Loans and discounts.—In making use of the funds that have been deposited with it, the bank extends credit to its customers in the form of either loans or discounts. The distinction between these two items is one of form only. When a bank advances a definite sum to a customer and the contract between them calls for the repayment of that sum plus interest, the transaction is referred to as a loan. A discount differs from a loan because interest is deducted by the bank in advance, the customer repaying only the face amount of the obligation. To illustrate, suppose a business man wishes to borrow \$1000 from his bank for a period of six months and that the rate charged by the bank is six per cent. In the case of a loan, the borrower would sign a note promising to pay at the end of six months \$1000 plus interest at six per cent. In other words, at the maturity of the loan he would owe the bank \$1000 plus \$30 interest, or a total of \$1030. If the transaction takes the form of a discount, however, the bank deducts the interest, amounting to \$30, from the face amount of the note, thus turning over to the borrower the sum of \$970. Six months later, at the maturity of the note, the borrower would owe the bank \$1000. The borrower pays a slightly higher rate for his money when his note is dis-

counted than he does in the case of a loan, but for short periods the difference is not appreciable and the convenience of the discount method has led to its wide use by banks on short-time advances.

In the foregoing example it was assumed that the loan or discount was evidenced by the borrower's own promissory note. As a matter of fact, a borrower may discount bills of exchange in the form of trade acceptances, but the bulk of the paper discounted by the banks in this country is in the form of the promissory note (either single or double name) and the note rather than the bill of exchange is used almost exclusively in the granting of loans by the banks.

The loan problem is by all odds the most important one the banker has to meet. A sound loan and investment policy is the heart of sound banking. The importance of making sound loans, from the point of view of the individual banker, may be made clear by an example. Suppose that a bank lends to its customers at a rate of interest of 6 per cent, and that one-third of this (or 2 per cent of the principal) represents net profit. In such circumstances, the loss of as small a sum as \$2000 on a bad loan would completely offset the net income from \$100,000 of sound loans. It is plain that the banker must use caution and judgment in the extension of credit if his profits are not to be seriously impaired.

The methods generally followed by banks in attempting, so far as possible, to avoid losses are first, to diversify their loans and investments to the extent necessary satisfactorily to spread their risks; second, to require good and sufficient security from the borrower when he has it available; and third, in the case of unsecured loans, to examine carefully each application for credit with a view to eliminating those risks which appear to be unsound. The attainment of a proper degree of diversification is generally left to the banker although, in the United States, the law attempts to cope with the problem by limiting the amount which can be loaned to one borrower. The law may also specify the type of collateral that the bank may accept, the margin of safety required, and the types of paper or securities that the bank may buy, in an effort to increase the soundness of the bank's loans and investments. On the whole, however, the decision

as to whether or not a loan shall be granted must, at least within the limits of the law, necessarily rest with the banker, and the larger banks commonly maintain credit departments for the purpose of investigating the credit risk of prospective borrowers.

Investments. — A bank will usually have some funds which are not loaned out to borrowers and which the bank does not wish to hold idle in the form of reserves. These funds may be invested in bonds, notes, or other obligations of various sorts in order to earn an income for the bank. In recent years, investments of banks have increased greatly relatively to loans (See Chapter XIV) and it follows that a sound investment policy, like a sound loan policy, is becoming of great importance in bank management. Whereas, in earlier years, the loan problem was of paramount importance, the investment problem now occupies at least an equally important place.

As in the case of loans, a sound investment policy calls for the proper diversification of risks. Otherwise the investment problem is concerned with the soundness of the securities purchased and the state of the market for such securities. The latter is particularly important if the investments are not bought for more or less permanent holding, but may have to be sold shortly to obtain funds for lending or other purposes. Obviously, if the banks buy bonds when the price is high and have to sell them in a lower market, substantial losses may be suffered. Moreover, even if there is no prospect that the bonds will have to be sold, the state of the market at the time of purchase is important in determining the yield which the banker will receive.

Reserves. — Not all of the funds which are deposited with a bank may be loaned to customers or invested. Some portion of the deposits must be held as reserve to meet the demands of the bank's customers who wish to withdraw their deposits. The factors governing the size and composition of a bank's reserve will be discussed fully at a later point (Chapter XIII). Here it need only be pointed out that the actual or working reserve for the typical bank in this country consists of cash in vault, deposits with other banks (appearing on the statement as "Demand balances with other banks"),

and deposits with the Federal reserve bank (if the institution is a member of the Federal Reserve System). These items are frequently grouped together on the condensed form of bank statement distributed to the public.

The size of the reserve which is maintained by banks of deposit is determined by the type of deposit against which the reserve is held. Naturally, a higher reserve is necessary against deposits which are payable on demand than against those which are subject to notice, for the turnover of the latter is much slower than that of the former. In practice, the size of the reserves which are held against deposits is fixed fairly definitely either by custom or by law. Custom rules in nearly all countries, but in the United States the practice of designating minimum legal reserves has long been followed.

Items in process of collection.—An important incidental service performed by the banks is the collection of checks and drafts. Many of the banks' deposits are in the form of checks drawn on other banks in the system. In a condensed statement (such as appears on page 117) these items are grouped with "Balances with other banks" or "Due from banks," but a distinction should be made between checks and drafts drawn on other local banks, which are technically known as *exchanges for clearing house* and those drawn on out-of-town banks, which, when put in the mail, are known as *items in process of collection*. In the subjoined statement (page 117), these items, exchanges for clearing and balances due from other banks are lumped together, while the account "Cash items not in process of collection" represents those out-of-town checks and drafts which have been received by the bank on deposit from its customers, but has not yet been put in the mail.

The close relation of these two groups of items to deposits, reserves, and loans should be manifest. As deposits they are not cash, but claims to cash which have to be collected before they become loanable funds. As they are collected they build up the banks' reserve, and, as the latter becomes larger than is necessary to meet the requirements of prudence and safety, the excess amount may be used to increase the bank's loans or investments.

Bankers' acceptances.—Aside from the direct extension of credit to customers, a bank may be of service in granting what are known as *acceptance credits*. When this is done, the bank, acting on behalf of a customer, accepts a draft or drafts drawn against it by some third party and payable at some future date. The bank issues a letter of credit to the customer authorizing the drafts to be drawn against it, and thereby becomes liable for the acceptance of such drafts when drawn and presented to it. After acceptance the bank becomes liable for the payment of the drafts when due. Both letters of credit and acceptances are therefore included on the balance sheet among the bank's liabilities. The customer, however, is obligated to pay the bank the amount of the drafts which it has accepted for him on or before the date at which they mature. Consequently, the customer's liability to the bank constitutes an asset which offsets the liability incurred by the bank in engaging in this type of transaction.

The advantage of the bankers' acceptance—which will be treated more fully at a later point—is that it enables a customer to substitute the bank's credit standing for his own with resultant benefit to himself in certain types of transactions.

Capital and surplus.—The foregoing types of transactions cover in a general way what may be termed *the banking functions* performed by the typical bank. Since banking institutions are generally organized as corporations, however, it is necessary to mention the investment of the bank's stockholders in connection with a survey of the banking process. This investment appears on the liabilities side of the bank statement under the head of *capital stock*. Furthermore, every well-managed bank retains part of its earnings in the business instead of paying them all out in dividends. This portion of the earnings constitutes an added investment of the stockholders which appears on the statement as *surplus* and *undivided profits*.

A part of the funds received from the subscriptions of the stockholders may be invested in real estate and buildings to be used by the bank in the transaction of its business. If the bank decides to rent a building, this investment is, of course, unnecessary. Assuming that the building has been pur-

chased instead of rented, the remaining portion of the capital, as well as any surplus which is subsequently accumulated, may be invested as the bank sees fit in any safe form of security. Capital funds are not subject to withdrawal as are deposits, therefore they may be directed into any secure investment channel.

From the point of view of the stockholders the purpose of the capital³ is to earn profits for the payment of dividends. The investment in the bank's business of the capital alone, however, would bring meager returns. The margin of profit per transaction on which the bank operates is extremely small, and it is only by acquiring and lending deposits to several times the amount of the capital that it can hope to earn a satisfactory return on the investment of its stockholders. But in acquiring deposits the bank acquires creditors, and from the point of view of the latter the purpose of the capital is to protect them against loss. Consequently, there is some conflict of interests between the stockholders and the depositors. Speaking generally, the smaller the capital in relation to the deposits, the larger the earnings on the investment. On the other hand, the larger the proportion of capital to deposits, the greater the protection afforded the depositor.

In practice, the proportion of capital (including surplus and undivided profits) to deposits varies considerably from country to country, and it is impossible to cite any particular ratio as typical. On the whole, however, it may be stated roughly that it is not desirable for banks to allow their capital funds to fall to a point much below 10 or 12 per cent of their total liabilities. Should the proportion become too small, it should be increased either by the sale of additional stock, or by diverting more of the earnings to surplus and less to the payment of dividends.

The banks of most countries are not regulated by law with respect to their capital and surplus or the disposition of their earnings, control over these factors being left to the judgment of the bankers. In some countries, however, of which the United States is an example, a minimum sub-

³ For the sake of simplicity, the word *capital* will be used to denote both capital and surplus in the present discussion.

scribed and paid-in capital is required before a bank may begin business. Where the establishment of a banking business is free to all, a reasonably rigid capital requirement helps to discourage financially weak and incompetent men from entering the business, and also tends to prevent the establishment of banking units of such small size that earnings may fail to cover overhead expense, and that proper diversification of loans may be impossible.⁴ The national banks of the United States are also required to carry one-tenth of their earnings to surplus until the latter shall equal the capital stock.

The bank statement.—The results of carrying on a banking business are best shown by the bank's statement of condition or balance sheet as published periodically by banking institutions in this country. The accompanying statement, based on a recent combined report of national banks, will serve to show the relations between the various items which have been discussed in the preceding paragraphs. Certain items on the statement, which it has not been deemed necessary to consider here, will be dealt with at a later point (Chapter XIX).

The purpose of the discussion up to this point has been to indicate the nature of the banking process by a brief consideration of the types of transactions engaged in by the individual bank. The remaining pages of the chapter will be devoted to an analysis of the significance of banking functions in the economic activity of the country.

THE FUNCTIONS OF BANKING

Effective distribution of capital.—The chief function of banks in the economic system is to effect a distribution of surplus funds into productive channels. This is made possible through the pooling of funds which occurs as a result of the acceptance of deposits by the banks. The deposits of all the banks of the system constitute a reservoir or pool from which the productive needs of business may be supplied. In order clearly to understand the manner in which the banks perform this function, it will be necessary to consider the banking system in relation to the economic system as a whole.

⁴ See article by R. P. Crawford in *Barron's*, August 1, 1927; quoted in Rodkey, *The Banking Process*, p. 47.

UNITED NATIONAL BANK

Statement of Condition, June 29, 1940

RESOURCES

Loans and discounts, including rediscounts and overdrafts	\$ 9,179,227
U. S. Government direct obligations	7,219,890
Obligations guaranteed by U. S. Government	1,891,336
Other bonds, stocks, etc.	3,794,049
Currency and coin	582,303
Balances with other banks, including reserve balances and cash items in process of collection	13,294,801
Bank premises, furniture and fixtures	597,251
Other real estate	184,907
Customers' liability on acceptances outstanding	42,339
Other assets	98,977
	<u>\$36,885,080</u>

LIABILITIES

Demand deposits	\$18,432,047
Time deposits, including postal savings	8,355,079
Deposits of other banks	5,985,356
Other deposits, including certified and cashiers' checks	301,925
Bills payable and rediscounts	2,910
Acceptances executed by other banks and outstanding	50,641
Interest, discount and other income collected but not earned	41,376
Interest, taxes and other expenses accrued and unpaid	49,741
Other liabilities	189,564
Capital stock, preferred	208,763
Capital stock, common	1,325,886
Surplus	1,249,961
Undivided profits	468,203
Reserves and preferred stock retirement account	223,628
	<u>\$36,885,080</u>

In the present economic order, which may be termed a *money economy*, goods and services are produced, not for the use of the particular individuals producing them, but in exchange for money which is in turn spent in the markets for other goods and services which these particular individuals want. Further, the productive and distributive processes are themselves broken up into a number of steps. One set of business men is responsible for the production of raw materials. These materials in turn are sold to the manufac-

turers who convert them into finished goods which must then pass through the hands of the wholesalers and the retailers before they are purchased by the final consumer.

Each of the business enterprises or individuals in the productive and distributive chain receives a money income in exchange for the goods or services sold in the market. The bulk of this income is immediately spent for other goods or services. The major portion of the gross income of business enterprises, for example, is presently spent to replenish stocks of raw materials for manufacture and for labor and capital with which to carry on the productive process. In merchandising establishments, most of the gross income is reinvested in merchandise inventory. As for the wage-earner, the greatest part of his income is spent at once for consumable commodities and services.

While each of the participants in the productive process spends practically all of his money income almost as soon as it has been received, it should be noted that not quite all of it is thus spent. Every business enterprise must, of necessity, keep some portion of its assets in the form of immediate purchasing power to meet claims to payment which may and do arise. It is never certain that payments from debtors for goods sold will be forthcoming at the exact times and in the exact amounts necessary to meet debts due to creditors, and some margin of cash must be maintained in the business to assure the prompt payment of such debts. Even individuals, unless in very straitened circumstances, set aside some small portion of their incomes to meet contingencies or to build up a fund for investment. It is these surpluses of purchasing-power which form the deposits of the banks.

Without the mediation of the banks, these surplus funds would of necessity be held in the form of cash (i.e., hand-to-hand money) by the individuals and enterprises in question. To illustrate, suppose that Jones, a merchant, has obtained \$5000 in cash from the sale of a part of his stock of goods. He has some payments to make in the succeeding few weeks which will require the use of practically all of this balance, but not all of these payments have to be made on the same day, and the expenditure of this amount will be spread over the interval in a somewhat irregular fashion. A certain

amount will be paid out, possibly, in three days, another in a week, another in two weeks, and still another in about a month. He will, perhaps, have an *average* holding of \$2500 cash throughout the month, but the *actual* amount held will vary from \$5000 at the beginning of the interval to very little at the end.

In the circumstances it should be clear that Jones could not lend his balance and thus make it available to industry without the intervention of some banking mechanism. Perhaps he knows another merchant, Smith, who would like to borrow \$2500 for thirty days, but he cannot lend Smith this amount for the desired period since, before the thirty days have elapsed, he will need all but a small portion of his balance to meet his own payments. Furthermore, he cannot afford to spend his time looking for borrowers who want just the amounts he has available for exactly the periods of time for which he might be willing to lend them. His business is selling merchandise, and he would scarcely find it economical to engage in an entirely unrelated pursuit which, in the end, would in all probability prove to be unsuccessful.

The significance of the pooling process.—If these various surpluses of individuals and business enterprises are deposited with the banks instead of being held as cash, it is possible to make use of a large portion of them. While deposits in the bank are subject to withdrawal on demand or at comparatively short notice, the pooling of a large number of different deposits or surpluses results in withdrawals being offset in large part by other deposits, so that the banks are in a position to lend or invest the bulk of these deposited funds, keeping only a relatively small amount available as reserves.

With respect to deposits which are payable on demand, the small bank with relatively few depositors may at times be subjected to withdrawals which are considerably in excess of deposits. For the system as a whole, however, deposits and withdrawals are approximately equal. It is hence important that the banks of the system be so organized that excess deposits in certain areas may be available for use in those sections where a deficiency of surplus funds has manifested itself. When this is the case, the amount of final or stand-

ard-money reserves needed by the system is reduced to a minimum.

The pooling process just described results in a double saving to industry. Thus, to revert to our first illustration, it not only permits Jones's \$2500 average balance to be loaned to Smith, when without the mediation of the bank it would have been held idle in the form of cash, but it also permits Smith to maintain a smaller proportion of his assets in cash than would otherwise be necessary, since he knows that he can borrow at the bank to meet temporary, seasonal, or unusual needs. If Smith were not able to do this, he would have to maintain a large enough supply of cash in his business in the dull seasons to meet his peak needs, a procedure which is decidedly uneconomical.

Selective utilization of funds.—Not only do the banks effect a distribution to, and utilization by, industry of surplus funds that would otherwise be held idle in the form of cash, but they also see to it that these funds are distributed in a highly selective fashion. From the point of view of their own safety, they must necessarily examine carefully the financial position of those to whom they lend or in whose securities they invest. It is true, of course, that some banks come to grief through unwise lending and investment policies. By and large, however, there is no question that the banks are superior to the great majority of individuals in their ability to invest their funds in sound and efficient enterprises. They thus perform a service for the depositor and for the economic system as a whole in assuring the utilization of surplus funds by those best able to make sound and efficient use of them.

The transfer of funds.—Another function of the banking system, which is essential to its chief service of pooling and lending deposits, is the transfer of funds from one part of the country to another. The technique by which such transfers are effected will be treated in subsequent chapters. It will suffice to point out here that the performance of this function has led to the development of the check or deposit currency, our most efficient and widely used medium of exchange. Checks drawn on one bank are, to a large extent, canceled against checks drawn on other banks, and, to the

degree that this takes place, the use of hand-to-hand money is obviated and the utilization of surpluses is made that much more efficient.

In making foreign payments, the service performed by the banks in transferring funds is of large significance. In this connection, as well as domestically, the cancellation of claims plays an important part in facilitating trade and bringing about the most efficient utilization of surplus funds.

In addition to transferring funds by means of checks or drafts, the banks have developed systems of telegraphic transfers, so that payments may be made at distant places without the loss of time necessary to the sending of checks or drafts by mail. The value of this service is obvious.

Collection of time items.—Another incidental service performed by the banks is the collection of maturing notes or drafts for customers. Since the banks at times discount notes and drafts on out-of-town establishments, they must be prepared to present these instruments to the payer at maturity and so have the facilities at hand for making such collections. In a sense this service is a part of the larger one of transferring funds and may well be considered in relation to it.

Fiscal agent for government.—Some or all of the banks in the system usually act as fiscal agents for the government. In so doing, however, they are performing no new function, but are merely extending to the government the benefit of those services which are regularly offered to the banks' private customers.

THE ORIGIN OF COMMERCIAL BANKING

Early banking development.—In the civilization of the ancients, there is evidence of the use of certain instruments similar to those now used in modern banking. Conant points out, for example, that "Assyria, as early as the seventh and even the ninth century before Christ, possessed a system of commercial instruments, which included promissory notes, bills of exchange, and transfer checks, not unlike the modern bank check."⁵ Coined money was not in use, so that payment in specified weights of silver or copper was usually

⁵ *A History of Modern Banks of Issue*, p. 1.

stipulated. The notes and bills were made of clay tablets, baked hard to preserve the impressions on them, and placed in the temple or record chamber of the city for safe keeping.⁶ Banking of a sort was also carried on in Greece and Rome at later dates, and the reference in the New Testament to the activities of the money-changers in the Temple at Jerusalem is, of course, perfectly familiar. With the advent of the Dark Ages, the business of banking sank into obscurity, to be revived with the return to commerce and industry at a later period.

Early European banking. — The revival of banking in the Middle Ages was first brought about in Italy by private individuals who engaged in business in the market-places on benches, or *banchi*. From these beginnings there developed gradually a number of powerful private banking establishments, such as the Peruzzi and the Bardi.⁷ These Italian bankers financed wars for kings and other large projects, and the two mentioned finally failed because certain kings, who owed them large amounts, repudiated their debts.⁸

The first bank of a public nature was the Bank of Venice, founded supposedly in 1157.⁹ The drapers carried on a banking business in Barcelona as early as 1349, to be followed by a public bank in 1401. The Bank of Genoa was also established shortly thereafter, in 1407. The Banks of Venice and Genoa continued in business until the close of the eighteenth century.

Some time after the establishment of these Italian banks, the center of commerce in Europe shifted to the north, a movement which was marked by the organization of the historically famous Bank of Amsterdam in 1609.¹⁰ The Bank of Hamburg was founded in 1619, the Bank of Stockholm in 1688, and the Bank of Vienna in 1703. Various other banks, in Germany, Austria, Russia, and France were established at somewhat later dates.¹¹ In addition to these public institutions, many private bankers and banking houses,

⁶ *Ibid.*, p. 2.

⁷ H. deB. Gibbins, *The History of Commerce in Europe*, p. 167.

⁸ Edward III, of England and the King of Sicily. *Ibid.*, pp. 47-48.

⁹ Gilbert, *Works*, IV, p. 8.

¹⁰ For an interesting description of this bank, see Adam Smith's *Wealth of Nations*, I, p. 481, 6th Edition.

¹¹ Gibbins, *op. cit.*, p. 167.

such as the Fuggers and Welsers of Augsburg, and the Hochstetters of Amsterdam, made prominent names for themselves at various periods in the Middle Ages and thereafter.

Nature of European banks.—The early European public banks did not engage in what would now be called banking, but rather performed services of a monetary nature. The metallic currency in circulation, in the smaller states especially, was made up of a heterogeneous mixture of full-weight, clipped or mutilated, domestic, and foreign coins. The attribute of uniformity, so essential to satisfactory trade, was therefore lacking, and the chief purpose of the Banks of Venice, Genoa, Amsterdam, etc., was to remedy this monetary difficulty. The method used to accomplish this was as follows: all sorts of metallic money—clipped, worn, or foreign—were received on deposit by the bank by weight only, a credit being given in terms of the standard money of the country which corresponded to the fine weight of the coins received, less a small amount to cover the cost of recoinage and the necessary expenses of management of the bank. These credits on the books of the bank were called *bank money*. They could be easily transferred by order or check, so that they possessed the advantages of convenience and safety, while, at the same time, the resort to bank money as a means of payment eliminated the difficulties engendered by the heterogeneous metallic circulation.

The private bankers, on the other hand, were in the nature of financiers. They made loans to kings for carrying on wars and financed other projects which held out the prospect of a high profit. They did not confine themselves to lending money, however, but built up huge interests of their own. Thus, "the Fuggers endeavored to acquire large territories in Chile, and the Welsers of Augsburg under Charles V obtained an entire province in Venezuela,"¹² while, between 1511 and 1517, the Hochstetters attempted to corner the tin market. It is accordingly somewhat of a misnomer to call these private houses banking establishments, since receiving deposits and subsequently lending them was only one of a wide list of financial interests.

¹² Conant, *op. cit.*, p. 12.

The origin of banking in England.—In England, prior to 1640, it was the habit of the London merchants to keep deposits of bullion in the Tower, but in that year Charles I seized these deposits to the amount of £130,000, and they were repaid only after some time had elapsed and much confusion had resulted.¹³ This action led the merchants to seek elsewhere for a safe depository for their money and bullion. It was idle for them to try to keep it on their own premises, for they were defrauded by their clerks who either decamped with the money or, when less dishonest, loaned it out to goldsmiths for a specified return. The merchants thereupon decided that they had better place their money with the goldsmiths directly.

At first the object of depositing money with the goldsmiths was to procure safety, and the merchants would have been satisfied with the attainment of this end, even without receiving any return upon the deposited funds. The goldsmiths, however, found that they could lend out these deposits to good advantage and so began to offer a substantial rate of interest in order to procure more of them. While carrying on this business, the goldsmiths also performed the function of money-changing (i.e., dealing in exchange), and, for a time, continued their earlier practice of dealing in and working with gold and silver bullion and ornaments. The receiving of deposits and making of loans, however, shortly surpassed their original business in importance and finally superseded it.¹⁴

While the chief object of the goldsmiths in accumulating deposits was to make a profit from lending them at high rates, the merchants were at first impelled to make these deposits, as already indicated, as a matter of security. Before long the element of convenience was added to that of safety. This resulted from the ease with which payments could be made under the new system. The goldsmiths agreed to repay the deposits on demand, and the merchants could have withdrawn coin or bullion when they had payments to make, but they found it simpler either to write an

¹³ See Andreades, *History of the Bank of England*, pp. 18-20.

¹⁴ A good brief description of the beginnings of banking with the goldsmiths in England is to be found in Andreades, *op. cit.*, pp. 20-26.

order against the goldsmith to pay a specified amount to a designated party, or to accept the goldsmith's promissory notes for the payment of definite sums, which notes could, in turn, be used by the merchants as a handy means of meeting their payments. These goldsmiths' notes may be considered as the earliest form of English bank note, while the orders of the English merchants against the goldsmiths constituted the prototype of the modern check.

Although there was considerable criticism of the way in which some of the goldsmiths carried on their business, it was not until 1694 that any noteworthy change took place. In that year, the Bank of England was established. It was created as a private company, but soon (1697) was given partial monopoly privileges, and in 1709 it was granted a real monopoly of note issue. It became a bankers' bank in part, and the bulk of the regular banking business of the country continued in the hands of the private London and country banks.

The emergence of commercial banking systems.—As shown in the foregoing paragraphs, it is possible to distinguish functions resembling those of modern banking as far back as the Middle Ages and, prior to that, in ancient times among certain advanced peoples. On the other hand, it was also noted that, in a number of ways, these banks differed fundamentally from the modern commercial banking institution. Banks of the Amsterdam type served a monetary function in providing a uniform currency, the private bankers did an investment and speculative business, while the early English goldsmith bankers pooled deposits and extended loans, but the loans were frequently not for productive purposes.

In England the full development of commercial banking was forced to await the passage of an act in 1833 which permitted the establishment of joint stock banks in London. It was not until some years after the establishment of the Bank of France in 1800 that the French banking system attained a definite form. In Germany, the establishment of the Empire in 1871 necessarily preceded the development of a unified banking system, although the different German states had banking facilities before that date. The development

of the banking system of the United States began about the turn of the nineteenth century, while the less developed region occupied by Canada did not need highly organized banking facilities until some time later.

This rather belated development of unified banking systems is, perhaps, not to be wondered at. The nineteenth century ushered in an era of unprecedented industrial expansion, the credit needs of which could be met only with the assistance of improved banking facilities capable of financing the ever increasing production of goods made possible by machine methods under the factory system. The growing credit requirements of industry and trade permitted specialization in purely banking functions with results distinctly favorable to unified banking development. Furthermore, many of the earlier coinage and monetary problems had been solved, in part at least, which allowed the banks to turn their attention in large measure from money-changing to the extension of credit to business enterprises.

Conclusion. — We have now considered briefly the nature, functions and origin of commercial banking. Before considering in detail the major bank liabilities and assets described in the foregoing paragraphs, it will be advisable to turn attention to the development of the banking system of the United States. The chapters which follow are accordingly devoted to this subject.

REFERENCES

- Andreades, A. *History of the Bank of England*. London. 1924.
 Conant, C. A. *A History of Modern Banks of Issue*. New York (Sixth Edition). 1927.
 Gibbons, H. deB. *The History of Commerce in Europe*. London. 1923.
 Gilbert, J. W. *Works*, Vol. IV.
 Landmann, J. "Banking, Commercial: History to the Close of the Eighteenth Century." *Encyclopaedia of the Social Sciences*.
 Richards, R. D. *The Early History of Banking in England*. London. 1929.
 Spalding, W. F. *The London Money Market*. London (Fourth Edition). 1930.
 Willis, H. P. and Beckhart, B. H. *Foreign Banking Systems*. New York. 1929.
Commercial Banks, 1913-1929. Geneva (League of Nations). 1931.

CHAPTER VI

EARLY AMERICAN BANKING

Introduction. — In tracing the evolution of American banking, the close of the Revolutionary War may be taken as a starting point. Not only does this date mark the beginning, approximately, of the United States as an independent nation, but it is also to be noted that, aside from a few ill-conceived attempts at land banking in the colonies, no real banking institutions, deserving of the name, had been established prior to the termination of the Revolution. Commencing at this point, then, the treatment of American banking development may be conveniently divided into three periods, viz., first, 1781–1836 ; second, 1836–1863 ; and third, 1863–1913. The first of these periods terminates with the expiration of the charter of the Second Bank of the United States ; the second is a period of purely state banking ; the last period covers the development of the national banking system up to the passage of the Federal Reserve Act in 1913.

THE UNITED STATES BANKS : 1781–1836

Three early banks. — At the time of the establishment of the First Bank of the United States there were in existence three rather notable banks operating under state charters, all of which were soundly managed and successful institutions. The first, in order of time, was the Bank of North America, sponsored by Robert Morris and located in Philadelphia. It was first chartered by the Continental Congress on the last day of 1781, and commenced business on January 7, 1782. It was later rechartered by Pennsylvania, there being some doubt as to the ability of the Continental Congress to grant a bank charter. It assisted the government to some extent

in financing the Revolution¹ and was an undoubted asset to the business community.

The Bank of Massachusetts, at Boston, and the Bank of New York, New York City, were both founded in 1784. The former received a charter in that year from Massachusetts, but the latter operated without specific authorization until 1791, when it was given a charter by the State of New York. The articles of association under which the Bank of New York commenced its business were drawn by Alexander Hamilton, who was instrumental in founding the bank and was a member of its first board of directors.² Both of these institutions proved advantageous to the communities in which they were located.

The First Bank of the United States : 1791-1811.—The passage of the Act of February 25, 1791, incorporating the subscribers to the Bank of the United States, was largely the result of the efforts of Alexander Hamilton, then Secretary of the Treasury under Washington. Hamilton, who, as already noted, had earlier been active in founding the Bank of New York, was not slow to realize the benefits which the national government might expect to receive from the establishment of such an institution. Some of the Federalists and a majority of the Republicans were opposed to the incorporation of a national bank, mainly on the ground that it would be unconstitutional, but a bill finally passed both Houses of Congress and, after mature deliberation, was signed by Washington and became law.

Provisions of the charter.—The act provided that the new bank, which was to be located in Philadelphia, should have a capital of \$10,000,000, composed of 25,000 shares with a par value of \$400 each. The government was to subscribe to \$2,000,000 of stock, in return for which the bank was to lend the government a like amount, this loan to be repaid in ten annual installments. Subscribers to stock in the bank, other than the government, were to pay one-fourth of their subscriptions in specie and three-fourths in 6 per cent government stock (bonds), payments to be made

¹ Gouge thinks this assistance was much less important than is usually believed. See his *Short History of Paper Money and Banking* (New York 1835), p. 12.

² *Finance Report* 1876, p. 133.

in four equal semi-annual installments. Single subscriptions were limited to a maximum of 1000 shares.

The management of the bank was vested in a board of twenty-five directors elected by the stockholders, the small stockholders being favored since the proportion of votes to shares decreased with increased holdings of stock, and an absolute upper limit of thirty votes was fixed for any one shareholder. Foreign holders of stock, moreover, were not allowed to vote by proxy. Not more than three-fourth of the directors were eligible for re-election the following year, and all the directors were required to be citizens of the United States and stockholders in the bank. The board of directors was authorized to appoint a president who should receive a salary, although the members of the board were to receive no compensation. Seven directors were necessary to constitute a quorum for the transaction of business.

The bank was empowered to receive deposits, issue notes, and make discounts. Note issues were limited to \$10,000,000, the amount of the capital stock. The rate of discount charged was not to be higher than 6 per cent, and the bank was forbidden either to deal in commodities directly or to hold more real estate than was necessary to the business of the bank, other than such real estate as had been mortgaged to it by way of security on loans. No loan might be made to the Federal government in excess of \$100,000, except by special authorization from Congress, and loans to the states were limited to \$50,000 each. The bank might sell any government stock (bonds) in its possession, but it was not permitted to buy such stock. It might establish branches wherever convenient for the transaction of its business. The charter was to expire, unless renewed by Congress, on March 4, 1811.

Operations of the bank.—The bank opened its doors for regular business on December 12, 1791, and continued in operation until the expiration of its charter. It was, on the whole, highly successful. It entered into friendly relations with the city banks of Philadelphia and New York, and established contacts and some measure of control over other state banks through the opening of branch offices: branches

being eventually established in Boston, New York, Baltimore, Norfolk, Charleston, Savannah, Washington, and New Orleans.

The method of regulating the note issues of the state banks is worthy of comment. At the time the Bank of the United States was chartered, there was in existence, aside from the three banks previously mentioned, but one state bank, the Bank of Maryland, chartered in 1790. Relations with the state banks were, therefore, at first of comparatively slight importance. By the close of the century, however, the number of state-chartered institutions had increased to twenty-six, an increase which continued throughout the life of the First Bank, there being eighty-eight state banks in operation in 1811.³ As the number of state institutions grew larger, payments to, and deposits in, the Bank of the United States included a goodly proportion of state bank notes. By sending these notes back to the issuing banks for redemption in specie, the United States Bank prevented the state institutions from expanding their note issues too rapidly. As the United States Bank refused the notes of state banks that would not redeem them, the latter institutions were careful to remain on a specie-paying basis.

Aside from controlling the issues of the state banks, the Bank of the United States was of great assistance to the commercial community and to the government. It discounted notes and bills for private customers, assisted importers in the payment of customs duties, and issued its own notes which gained an extensive circulation since they were legal tender in payments to the government. The Bank served the government as fiscal agent, collecting and transferring funds for it, and also made a number of loans to the Treasury. The government had some difficulty in paying back its original loan of \$2,000,000 to the Bank, and was finally forced to dispose of its holdings of bank stock to accomplish this. The last of the government holdings of bank stock was sold in 1802 at a large premium, and, from that date on, the Bank was privately owned as well as privately operated.

In view of the very evident advantages of a well-managed

³ *Ibid.*, pp. 153-154.

national bank, it seems hardly credible that Congress should have refused to renew the charter of the Bank of the United States in 1811. Nevertheless, there was still a good deal of opposition to its renewal on constitutional and other grounds, with the result that the charter was not extended and the Bank was forced to wind up its affairs. Upon liquidation the stockholders finally received \$434 for each \$400 share held,⁴ although the time taken to complete the settlement was so extended that the loss of interest more than offset the premium received.⁵

State banking : 1811-1816. — With the dissolution of the First Bank of the United States, the organization of many new state institutions occurred, the latter increasing in number from 88 in 1811 to 246 in 1816. The government deposits, about two-thirds of which had been kept with the Bank of the United States during its active operation, were distributed among the state banks in this period, and the desire to obtain some of these deposits, as well as to engage in business unhampered by the restraining influence of a national bank, doubtless explains the great increase in the number of state institutions in the five years under consideration.

The state banks were not, on the whole, satisfactory depositories for the national government's funds. They issued a plethora of notes, many of which were depreciated, and in 1814 practically all of the banks except those in New England suspended specie payments. Meanwhile, the government was trying to finance the War of 1812 by means of bank loans, a process which enhanced the difficulties of a system of diverse state banks subject to little or no restraint. Payments to the government were made in depreciated bank notes, government funds were on deposit in non-specie-paying banks, and the credit of the government was none too good. Altogether, the situation was critical.

The Second Bank of the United States : 1816-1836. — In such circumstances it is not surprising to find that there soon developed an agitation for a revival of the Bank of the United States. In fact, a petition of 150 New York citizens to establish a national bank was referred to the House

⁴ White, *Money and Banking*, p. 264.

⁵ Gouge, *op. cit.*, p. 15 note.

Ways and Means Committee in January 1814.⁶ Nothing came of this petition or of five subsequent attempts to charter a new United States Bank. Secretary of the Treasury Dallas submitted various plans, as did some others, but they were voted down because of objections to particular features. The wretched condition of the state banks, however, coupled with the difficulties of the national treasury, had weakened the opposition to a national bank as such, and finally, after six unsuccessful attempts, a bill chartering a second Bank of the United States was passed by both Houses and signed by the President on April 10, 1816.

Provisions of the charter.—The charter provisions of the Second Bank strongly resembled those of the First Bank of the United States in broad outlines, although differing at some points with regard to details. The capital of the new bank was to be \$35,000,000, of which the government was to subscribe to one-fifth, or \$7,000,000, the other four-fifths to be offered for private subscription. Payment was to be made, one-fourth in specie and three-fourths in government stock (bonds), as far as private subscriptions were concerned, while the government was to pay for its subscribed shares entirely with its own stock (bonds). The par value of the stock of the Bank was fixed at \$100 per share, and individual private subscriptions were limited to 3000 shares. Subscriptions were to be paid in three installments, at specified intervals covering eighteen months, in the proportion of \$5 specie to \$25 government stock on the first installment and \$10 specie to \$25 government stock on the other two. The Bank was to pay the government a bonus of \$1,500,000.

A change was made in the management feature of the new Bank by a provision specifying the appointment of five of the twenty-five directors by the President of the United States. The remaining twenty were to be elected by the stockholders, who were to have voting rights in the same proportion to holdings of stock as had been accorded to shareholders in the first Bank. Provisions regarding the voting of foreign shareholders, the qualifications of directors and their eligibility for re-election, the appointment and tenure of the president of the Bank, etc., were also substantially the

⁶ Catterall, *The Second Bank of the United States*, p. 7.

same as those of the first Bank's charter. The management of the branches, however, was specified in more detail than in the case of the first Bank's charter.

With the exception of a few minor details, the limitations with respect to the nature of the Bank's business were identical with those governing the operations of the earlier bank. Note issues were allowed up to \$35,000,000, instead of \$10,000,000, but this merely corresponded to the increased capital of the second Bank. There were also one or two other unimportant changes which require no special comment. The charter was granted for a period of twenty years.⁷

Operations of the Second Bank. — The Second Bank of the United States began business on December 31, 1816. Unfortunately, it was not properly managed during the first few years of its existence, a fact which largely destroyed its usefulness for a considerable time. William Jones, the first president, was not a competent banker, nor was he sufficiently strict in his control over the branches. Three directors of the Baltimore branch headed a clique of speculators which nearly brought the Bank to ruin. "This little band of gamblers attempted, with only too much success, to direct the bank's business so as to manipulate the price of the stock in the open market."⁸ They made loans to themselves of bank funds for the purpose of buying up stock, and engaged in other practices of an unsound and fraudulent nature. Things were in a precarious state when, in January 1819, Jones was forced to retire. In March of the same year Langdon Cheves assumed the presidency of the institution.

Cheves was not a banker, but he possessed an honesty and determination which were much needed in the administration of the Bank at this time. His business was to restore the Bank to a sound condition, and he proceeded to accomplish this task. Some effort had been made to contract the Bank's note issues near the close of Jones's administration, and Cheves continued and extended this policy. The lending operations of the Western branches had resulted in a drain of the bank's capital from Philadelphia and the East to the

⁷ See a convenient comparison of charter provisions of the First and Second Banks in Dewey, *The Second Bank of the United States*, pp. 164-175.

⁸ Catterall, *op. cit.*, p. 40.

West, a situation which Cheves sought to correct by greatly restricting, and in some cases even forbidding, the issuance of notes by the branches. "Indeed," as Catterall points out, "during Cheves's entire administration the issues were so carefully restricted that it was hardly possible to speak of a circulation of the Bank of the United States in many parts of the country, notably in the West."⁹

While Cheves's policy succeeded in bringing the capital of the Bank back to the East and in putting the institution into a sound condition, it did not greatly contribute to the latter's usefulness or profitableness. Accordingly, Cheves, after accomplishing what he had set out to do, retired in January 1823, at which time Nicholas Biddle became the president of the Bank. It was during Biddle's administration that the Bank attained its greatest success. The contraction policy of Cheves was dropped and the Bank began to assume a place of importance throughout the country. Twenty-six branches were eventually established,¹⁰ a number of these being organized during Biddle's administration. Biddle's success was largely due to the close scrutiny which he maintained over the business of the branches in various parts of the country. Although some of their loans and practices were not always of the best, they were, on the whole, soundly operated. Some measure of control was also exerted over the issues of the state banks through the process of sending the latter's notes home to them for redemption where this could be conveniently done. Transfers of funds for the government and for others were made efficiently, and the exchange charged on transfers for individuals was moderate for those days. All in all, the Bank must be considered as having been efficiently and successfully operated from 1823 up to the summer of 1833.

In August 1833, the Bank began to contract its business, a policy which was continued until the summer of 1834. The supposed reason for the contraction was the probable removal from the Bank of the government deposits. Biddle had antagonized Andrew Jackson, who did not like banks anyway, to a degree where a renewal of the charter seemed

⁹ *Ibid.*, p. 405.

¹⁰ Although not more than twenty-five existed at any one time. *Ibid.*, p. 398.

out of the question, and it was known to the administration of the Bank that Jackson wished to have the government deposits withdrawn even before the expiration of the charter. The contraction would, therefore, place the Bank in a position to pay these deposits, as well as to prepare to wind up affairs. Unquestionably, some curtailment of business was justified in the circumstances, but it was carried so far as unduly to injure business. It must be concluded that Biddle was retaliating against Jackson by way of oppressing business which was an unjust and unsportsmanlike procedure, although one that was quite natural in view of Jackson's stubborn and unreasoning opposition.

The policy of contraction ceased entirely in September 1834, but the remaining days of the Bank were devoted to getting its affairs in shape for liquidation. The deposits of the government were removed gradually, beginning in the fall of 1833, and, by 1835, the Bank had sold the assets of nine branches. The assets of nine more branches had been disposed of by April 3, 1836, and three other offices had been closed in the meantime. The charter expired on March 3, 1836, but the Bank did not close, as it had obtained a charter from Pennsylvania. It continued to do business under state law, but was not successful and finally failed miserably.

It should be clear from the foregoing account that the Second Bank of the United States served the country in satisfactory fashion for but little more than half of its chartered existence. There is no reason for believing, however, that the bank would not have continued as a valuable national asset after 1833 if the political entanglements of its last years could have been avoided and a renewal of its charter secured. The unsatisfactory banking conditions which followed 1836 are to be laid, in part at least, at the door of Andrew Jackson and his supporters in Congress.

THE PERIOD OF STATE BANKING: 1836-1863

Lack of uniformity.—Banking conditions in the United States during the period from 1836 to the establishment of the national banking system were, on the whole, less satisfactory than at any other stage of the banking development of the country. After the Bank of the United States ceased

its measures for contraction in 1834, a period of rapid state bank expansion set in, the number of state banks increasing from 506 in 1834 to 704 in 1835, an increase which continued until 1840 when there were 901 such institutions. The period following 1834 was one of speculative excesses accompanied by a rapid growth of banking facilities. As the Bank of the United States withdrew its controlling influence over the state banks, the note issues of the latter expanded rapidly from \$94,839,570 in 1834, to \$149,185,890 in 1837. The speculative mania terminated with a crisis in the latter year. A general suspension of specie payments took place, and many banks failed, although the total number increased as a result of the establishment of new banks. Circulation, which had fallen to \$116,138,910 in 1838, increased again, in 1839, to \$135,170,995. The recovery was not lasting, however, and the years 1840-1843 were even more disastrous to the banks than 1837 had been. The extent of the disaster is shown by the decrease in the number of banks from 901 in 1840 to 691 in 1843, which was accompanied by a decline in circulation from \$106,968,572 to \$58,563,608 in the same period.¹¹ It was not until 1845 that the banking system began to recover from the events of these years. It is unfortunate that the power and influence of the Second United States Bank should have been removed at a time when they could have been of the greatest service to the country.

It is true, of course, that the crisis period 1837-1842 affected the entire country and its banking institutions. Nevertheless, there was a great diversity in the strength of the banks in different sections of the country, and of different banks in the same section, and this diversity existed during the entire period with which we are here concerned. It is, perhaps, the lack of uniformity of banking conditions which is the outstanding characteristic of the period. This condition was a result, in part, of the variation in state laws and state supervision in different parts of the country, and, in part, of the economic differences of the various regions. To some extent, a similar diversity of banking conditions is found today, because of the existence of 48 systems of state banks

¹¹ The data here cited are to be found in a table of state bank statistics compiled by J. J. Knox, and appearing in the *Finance Report*, 1876, pp. 204-205.

in addition to the national banking system. The disparity of banking practice in the years 1836-1863, however, was not only absolutely greater than it is at present, but was of more significance relatively, since notes were of more importance than deposits outside the large cities, so that much of the hand-to-hand circulation of the country was furnished by the banks in the form of bank notes. Such being the case, the emphasis is properly placed on "circulation" in the discussions of banking development during this period.

Widespread abuses and defects.—In presenting a sketch of the period under review, we shall first consider some of the rather general defects in banking law, supervision, and practice, after which attention will be directed to some of the more satisfactory developments.

The paying in of capital.—The methods used to pay subscriptions to capital stock were unsound and unsatisfactory in many instances. Bank charters or banking laws usually required the payment of but a fraction of the required capital before the bank was permitted to begin business, the remainder to be paid in installments, the time and amount of which were left at times to the determination of the directors, although occasionally they were stated in the law. This led to the practice of paying in capital by borrowing at the bank. Stock subscribers would borrow at the bank on their personal notes, the proceeds of these loans being used to pay the stock subscription. A considerable share of the bank's capital then consisted of promissory notes of stockholders instead of cash actually paid in to the bank. Further, these stockholders' notes were frequently renewed as they came due, so that the situation depicted tended to be permanent. Obviously, in such circumstances the capital of the bank furnished little protection to noteholders and depositors.

Unsatisfactory limitation of note issues.—Although the amount of notes that a bank could issue was generally limited, the limit ordinarily specified was some proportion of the bank's capital. This was not a satisfactory method as it tended to divorce the bank's note issues from the amount of cash held for redemption purposes. Even assuming the entire capital to have been paid in cash, there is no reason for thinking it would be retained as a fund of specie, while in

the circumstances depicted in the preceding paragraph, it is clear that a bank's nominal capital often did not represent even an initial specie payment of any significance. The result was that the method of limitation mentioned frequently failed to prevent excessive note issues.

Lack of redemption facilities.—In addition to the inadequate regulations for limiting note issues, there was, in the usual case, no requirement for the redemption of notes except over the counter of the issuing bank.¹² Thus, in sections of the country at all distant from the issuing bank, the latter's notes would circulate only at a discount, and since they could usually be passed from hand to hand at a less discount than that at which they would be accepted by the local banks, they tended to stay in circulation rather than to be sent home for redemption. As a result, not only did the hand-to-hand currency of any section tend to be composed of a variety of notes with varying discounts, but the most effective check to over-issue—the prompt presentation of notes for redemption—was lacking as well.

Lack of uniformity.—As notes were issued by a heterogeneity of state banks, they were not uniform in design and were easily counterfeited. Counterfeiting became an art in this country toward the close of the period under consideration, and "Counterfeit Detectors" were regularly published in all the leading cities of the country.¹³ The difficulties caused by counterfeits were enhanced by the circulation of notes of "retired" or failed banks, which were of appreciable amount and were included in the lists published in the "Detectors."¹⁴

Unsound loans.—A further defect of the period arose from the unsound lending policies of many of the banks. The object of numerous banks was to get their notes into circulation with a view to making a profit. To accomplish this, loans were granted for long periods without regard to the use to which the borrowed funds were put. Loans to individuals without security and indefinitely renewable, and loans on real estate security for long periods, resulted in the

¹² The outstanding exception to this was the Suffolk system in New England, which is discussed later in the chapter.

¹³ Davis, A. McF., *The Origin of the National Banking System*, p. 24.

¹⁴ *Ibid.*, p. 25.

issuance of large amounts of notes which, with the lack of redemption facilities, stayed in circulation for indefinite periods without respect to the needs of business.

Inadequate supervision.—In some instances the evils which have been recorded were the result of the absence of sound regulatory provisions in the charters or laws under which the banks were operated. As time went on, however, a majority of the state legislatures attempted to remedy matters by placing various limitations on the business the banks could transact, by requiring security for note issues, and in other ways. That such regulation was often ineffective is to be attributed in part to inadequate supervision. Although some proportion of the banking legislation was ill-advised, many of the laws were sound and well-directed, but, however satisfactory a given law might be, there was little prospect of securing the desired result from it in the absence of proper provision for its enforcement. In a relatively new and rapidly developing country, where the demand for loans was great and where bankers of experience and judgment were scarce, there was an unusual need for active and intelligent supervision of bank activities. As a matter of fact, such supervision was, for the most part, either entirely lacking or quite incompetent to meet the necessities of the situation.

Outstanding developments.—In spite of the rather drab picture of American banking which has just been presented, the period 1836–1863 was not without noteworthy developments. Certain systems of note issue and redemption, certain banking laws, and certain individual banks stood out in distinct advance of their time. A discussion of the period would not be complete without at least a brief reference to some of the more notable accomplishments in the field of banking.

The Suffolk system in New England.—From the early days of the First Bank of the United States, the bank note currency of New England was superior, on the whole, to that of most of the other sections of the country. The banks of New England had been the only ones not to suspend specie payments in 1814, and, while failures occurred, the majority of the banks in this region were soundly operated. The early bank note situation in Boston was not satisfactory,

however, and this led to the establishment of the Suffolk system. The difficulty lay in the inability of the Boston banks to keep their notes in circulation alongside of those of the banks located in the country districts. Boston banks would accept the notes of out-of-town banks only at a discount commensurate—sometimes more than commensurate—with the cost of sending them home for redemption, while the notes which they had issued themselves had to be redeemed at par over their counters. Hence, people wanting specie or having payments to make at the Boston banks singled out the notes of the latter for these purposes, the notes of the solvent country banks passing in ordinary trade at par.

The New England Bank early turned its attention to a reduction of the discount on country bank paper by charging no more than the actual cost of redemption, and, after the establishment of the Suffolk Bank in 1818, the competition of the latter institution kept this discount at the lowest possible figure. Nevertheless, as long as any discount on country bank notes existed, the Boston banks were at a disadvantage, and in 1824 the Suffolk Bank proposed the plan of country note redemption that made New England bank notes the best in the country, generally speaking, until the establishment of the national banking system.

Briefly, the plan provided that any bank keeping a permanent deposit with the Suffolk of \$2000 or upwards (depending upon the size of the depositing bank) would have its notes received by the Suffolk at par and without other cost, provided that a sufficient added deposit were maintained to meet the charges of the notes so received. At stated intervals the notes of any bank so redeemed by the Suffolk would be sent home for payment, the Suffolk to receive in payment at par the notes of any solvent New England bank. Country banks that would not enter the plan were to have their notes sent home to them for redemption in specie.

The plan, in operation, allowed the Boston banks to keep their share of notes in circulation. But it did more than this. By acting as a clearing house for New England bank notes, the Suffolk prevented the undue expansion of country bank issues and gave New England a currency of uniform value

which was readily accepted at par not only in New England, but in many other regions as well. The business of the Suffolk was profitable and, in 1855, a competing institution, the Bank of Mutual Redemption, was established. It operated on the same plan as the Suffolk and maintained adequate redemption facilities in New England up to the time of the Civil War.¹⁵

The Safety-Fund System and the Free Banking Law in New York. — In an effort to protect bank creditors the New York State Legislature in 1829 passed a law, along the lines suggested by Mr. Joshua Forman, providing for the incorporation of safety fund banks in that state. Each bank established under this law was to pay to the State Treasurer each year an amount equal to $\frac{1}{2}$ of 1 per cent of its capital stock until payments amounted to 3 per cent of said capital. These payments were to constitute a fund to be invested in securities, and to be used in the event of failure of any safety-fund bank to pay such debts of the bank, exclusive of capital stock, as remained unpaid after the liquidation and distribution of the bank's assets. Upon depletion of the fund, the remaining banks were to be called on for additional contributions, up to one-half of 1 per cent of their capital each year, until the fund should be restored to its original proportions.

New York's experience with the "Safety-Fund" law was not particularly happy. Three banks failed in 1837, and their creditors were taken care of without difficulty.¹⁶ In the three years 1840-1842, however, eleven more banks failed and the strain on the fund was too great. Through the issuance of state bonds the noteholders were paid, but the fund was depleted to such an extent that later payments of the safety-fund banks had to be pledged to pay off the bonds that had been issued earlier.

The safety-fund idea was sound in principle, but the New York law had two serious defects. First, it applied to all creditors of the banks instead of to noteholders only; and, second, it based the contributions to the fund on capital stock

¹⁵ For a more detailed account of this system, see Root, C., *Sound Currency*, Vol. II, No. 13, pp. 276-283.

¹⁶ A supplementary law of May 8, 1837, authorized the Comptroller to make immediate payments to noteholders of failed banks. This was done in the three banks mentioned.

instead of notes in circulation. The first of these defects was remedied by law in 1845, but by that time it was too late to be of much use, as newly organized banks were being established under the free banking law of 1838.

The law of 1838 was not a protest against the safety-fund system, for it was passed before the eleven destructive failures of 1840-1842 occurred. Rather it was a result of the growing democratic objection to the establishment of banks by special charter. It was felt that banking, under the latter method of establishment, was made monopolistic, while the large amount of political log-rolling and bribery attendant upon the securing of bank charters was objected to. The law accordingly provided that any persons or associations of persons might organize banks by complying with the regulations set forth. The issuance of bank notes was placed in charge of an officer known as *the Comptroller of the Currency* who might issue such notes to banks upon the receipt of bonds of the United States, New York State, or other approved states or of mortgages on improved New York farm land to the amount of the notes received. Notes under \$1000 denomination were made payable on demand and various penalties were imposed for failure to pay such notes. The original law also required a reserve of 12½ per cent against note issues, but this provision was later repealed.

The banking law of 1838 was not especially successful in its effect on note issues. A large number of banks that had organized under the law failed, and it was soon found that the liquidation of the security was ordinarily insufficient to pay the noteholders in full. This led to a tightening up of the security requirements for bank notes, but the system never became extremely successful. The safety-fund plan, properly conceived, would have been far more desirable. The law did eliminate the objectionable method of establishing banks under special charter, however, and, from the point of view of banking development in the United States, both the note-issue provisions and the free banking feature of the law are significant, since both features were later incorporated in the national banking law and were hence destined to play an important part in the later evolution of our banking system.

The Louisiana banking law of 1842.—After the banks of Louisiana had suffered in marked fashion from the vicissitudes of the years following 1836, the State Legislature passed a banking act in 1842 which formed the most scientific piece of banking legislation of the pre-Civil War period. Its chief provisions have been well summarized by Mr. Horace White as follows :¹⁷

The principal features of this law were the requirements (1) of a specie reserve equal to one-third of all its liabilities to the public ; (2) the other two-thirds of its liabilities to be represented by commercial paper having not more than ninety days to run ; (3) all commercial paper to be paid at maturity ; and if not paid, or if an extension were asked for, the account of the party to be closed and his name to be sent to the other bank(s) as a delinquent ; (4) all banks to be examined by a board of State officers quarterly or oftener ; (5) bank directors to be individually liable for all loans or investments made in violation of the law, unless they could show that they had voted against the same if present ; (6) no bank to have less than fifty shareholders, having at least thirty shares each ; (7) any director going out of the State for more than thirty days, or absenting himself from five successive meetings of the board, to be deemed to have resigned, and his vacancy to be filled at once ; (8) no bank to pay out any notes but its own ; (9) all banks to pay their balance to each other (in) specie every Saturday, under penalty of being immediately put in liquidation ; (10) no bank to purchase its own shares or lend on its own shares more than thirty per cent of the market value thereof.

This act was strictly enforced and gave Louisiana sounder banking conditions than prevailed in many other parts of the country at that time.

The State Banks of Indiana and Ohio.—The State Bank of Indiana was incorporated in 1834, with an original capital of \$1,600,000, of which one-half was to be subscribed by the state and one-half by private parties. The charter called for a bank with branches, but the parent bank was merely a board of control, consisting of a president and four directors appointed by the legislature and one director chosen by each branch. The branches were independently organized and operated institutions, each with a capital of \$160,000, but were subject to the supervision of the central board. There were ten branches originally, the number being increased from time to time after 1834. The branches were em-

¹⁷ *Sound Currency*, Vol. II, No. 2, pp. 209-210.

powered to carry on a commercial banking business, and to issue notes not to exceed double the amount of their capital. The branches were independent in carrying on their business, but each branch was liable for the debts of every other branch.

The State Bank of Indiana was highly successful, being soundly operated during the period of its charter. It was rechartered in 1855 as the Bank of the State of Indiana, and was one of the few banks not to suspend specie payments in 1857. The state did not participate in the ownership of the rechartered bank.

The State Bank of Ohio was established under a banking law which was passed in 1845, and was organized along lines similar to the State Bank of Indiana. The state, however, did not subscribe to the stock of the Ohio bank. The parent bank (so-called) consisted of a mere board of control appointed by the branches. The branches were independently managed, and were jointly liable for one another's notes, but not for other debts as in the case of the State Bank of Indiana. Note issues were limited to specified proportions of the branches' capital, and each branch had to contribute an amount equal to 10 per cent of its issues, to be invested in a safety fund against its notes. If any branch became insolvent through failure to redeem its notes, its liabilities in the form of notes were to be redeemed from a fund of cash contributed by the other branches, these branches in turn to be reimbursed by the sale of securities from the safety fund. *The State Bank of Ohio operated successfully until the establishment of the national banking system. Its charter expired in 1865, with the result that a considerable number of branches were converted into national banks on, or just prior to, that date.*

The two state banks just described are interesting both as examples of sound banking at a time when much unsound banking was being practiced, and because of the similarity of their organization to that of the Federal Reserve System at a much later date.

The banks and the government.—Directly after the removal of its deposits from the Second Bank of the United States, the government was forced to keep its funds on

deposit with selected state banks. This did not prove wholly satisfactory, however, and in 1840 a law was passed providing for the payment of duties and taxes to the national government in specie, and for the establishment of an independent treasury as a depository for government funds. This law was repealed in 1841, but another similar act was passed in 1846. From the latter date until the close of the period under consideration the government held its funds in its own treasury and sub-treasuries instead of keeping them on deposit with the banks of the country.

Conclusion.—In an attempt to present a concise picture of early American banking developments, many interesting details have necessarily been omitted. That conditions were not generally satisfactory, however, in spite of some notable exceptions, cannot well be doubted. Reform of some sort was bound to put in an appearance, which it did presently in the form of the national banking system. The developments following the establishment of the latter system will be treated in the next chapter.

REFERENCES

- Chaddock, R. F. *The Safety Fund Banking System in New York, 1829-1866.* Washington (National Monetary Commission). 1910
- Catterall, R. C. H. *The Second Bank of the United States.* Chicago. 1903.
- Davis, A. McF. *The Origin of the National Banking System.* Washington (National Monetary Commission). 1910.
- Dewey, D. R. *State Banking Before the Civil War.* Washington (National Monetary Commission). 1910.
- Gouge, W. M. *Short History of Paper Money and Banking.* New York. 1835.
- Helderman, L. C. *National and State Banks: A Study of Their Origins.* Boston. 1931.
- Hepburn, A. B. *A History of Currency in the United States.*
- Holdsworth, J. T. and Dewey, D. R. *The First and Second Banks of the United States.* Washington (National Monetary Commission). 1910.
- Kinley, D. *The Independent Treasury of the United States and Its Relations to the Banks of the Country.* Washington (National Monetary Commission). 1910.
- Knox, J. J. *History of Banking in the United States.* New York. 1900.

- Root, L. C. "States as Bankers." *Sound Currency*, Vol. II. 1895.
- Root, L. C. "New England Bank Currency." *Sound Currency*, Vol. II. 1895.
- Root, L. C. "New York Bank Currency." *Sound Currency*, Vol. II, 1895.
- Sumner, W. G. *History of Banking in the United States*. New York. 1896.
- White, H. "National and State Banks." *Sound Currency*, Vol. II. 1895.
- White, H. *Money and Banking*.

CHAPTER VII

THE NATIONAL BANKING SYSTEM

The origin of the system.—The national banking system originated as a result of the financial exigencies of the government during the Civil War. Although the chaotic state of banking affairs under the various state systems made reform of some sort well-nigh imperative, it seems probable that measures for improvement of the existing situation, to be successful, would have had to originate with the states rather than with the Federal government, had it not been for the unusual conditions which surrounded the prosecution of the war. As it was, Secretary of the Treasury Chase was enabled to obtain the passage of a national banking law on the score of war-time necessity.

The plan advocated by Chase, which finally became the National Bank Act, provided for a uniform bank note currency to be secured by the deposit of government bonds by the banks organized under it, and there has been considerable difference of opinion as to whether the prime motivation behind the passage of the act was to obtain a uniform currency or to provide a market for government securities. Chase himself evidently considered the prospective improvement of the currency as of signal importance, although he was not blind to the advantages to be derived from the purchase of bonds by the banks. Opinions of Congressmen who voted for the measure were divided, some favoring it from the currency viewpoint and some from the standpoint of the market for "governments."¹ In any event, the question is one of academic interest only. More to the point is the fact that in practice the matter of a uniform currency exceeded in importance the stimulation which the system gave to the market for bonds of the United States, although the latter was of more than negligible importance.

¹ See Davis, A. McF., *The Origin of the National Banking System*, pp. 103 ff.

The Act of February 25, 1863, and its repeal.—What is now known as the National Bank Act originally became law on February 25, 1863, under the title of "An Act to provide a National Currency, secured by a pledge of United States stocks [bonds], and to provide for the circulation and redemption thereof." This act followed somewhat the New York State law of 1838 in providing for a free banking system with bond-secured bank note issues. A bureau of the Treasury was created, to be in charge of an appointed administrative officer known as the Comptroller of the Currency. The Comptroller was to supply the banks with notes, have custody of the plates and dies used in printing the notes, examine and require reports from the banks, and make an annual report to Congress. Provision was also made for the transfer of state banks to the national system, and for the issuance of notes by state banks under somewhat less satisfactory conditions than those controlling note issues by national associations.

This act was ambiguous in some respects and unsatisfactory in others, so that few banks were organized under it. As late as October 5, 1863, only 66 national banks were in operation, while the number of state banks was still over 1400. As a result, the act was repealed in its entirety, and a new measure, which removed many of the defects of the previous act, was approved and became law on June 3, 1864.

Provisions of the Act of June 3, 1864.—The revised National Bank Act² provided, as the earlier law had done, for a system of free banking under the general supervision of the Comptroller of the Currency. Any five or more natural persons were allowed to organize a national banking association by complying with certain formalities of a routine nature and by fulfilling the capital requirements which were specified in the law.

Capital.—Every national bank in cities of more than 50,000 inhabitants was required to have a subscribed capital of \$200,000. In cities of less than 50,000 inhabitants, the minimum capital required was \$100,000, except in places

² The Act of June 3, 1864, retained the title of its predecessor, the name National Bank Act being substituted therefor by the Act of June 20, 1874. For purposes of convenience, however, it will be referred to in the text by the later and shorter title.

with a population of less than 6,000, where banks were permitted to be established with the approval of the Secretary of the Treasury with a subscribed capital of \$50,000. One-half of the subscribed capital had to be paid in before beginning business, the remainder to be paid in monthly (or more frequent) installments of 10 per cent of the whole amount. The stockholders were made doubly liable for the debts of the bank in case of the insolvency of the latter. After a bank was in operation, it was permitted to declare a semi-annual dividend of as much of its net profits as was deemed expedient by the management, but, before so doing, it was compelled to carry one-tenth of its net profits of the preceding six months to its surplus account, until that account should amount to 20 per cent of its capital stock.

Note issues.—Every national banking association was required, as soon as organized, to deposit with the Secretary of the Treasury bonds of the United States in an amount equal to not less than one-third of its capital stock, nor less than \$30,000 in any event. Upon the security of these deposited bonds a bank could, if it so wished, obtain circulating notes from the Comptroller of the Currency up to 90 per cent of the par value of the bonds. Notes in excess of this amount might be obtained by depositing additional bonds in the same proportion, but no bank was allowed to issue notes in an amount greater than its paid-in capital. The notes, which were to be issued in denominations of from one to one thousand dollars,³ were to be redeemable in lawful money at the issuing bank and at certain redemption agencies, and were to be receivable at all national banks at par. They were also made a legal means of payment to the government for all dues except customs, and by the government for all payments except interest on the public debt.

The aggregate of national bank notes was limited by the Act to \$300,000,000, one-half of which was to be apportioned among the banks on the basis of the population of the

³ Not more than one-sixth of the notes issued by any national bank were to be in denominations of less than five dollars, while after the resumption of specie payments no notes of less than five-dollar denomination were to be issued. A war measure of October 5, 1917, again permitted the issuance of national bank notes in denominations of less than five dollars, but apparently no notes were ever issued under this authorization.

various states and territories, the other half to be apportioned by the Secretary of the Treasury with due regard to existing banking capital and business needs.

Reserves. — The banks in seventeen designated cities, including New York, were required to maintain reserves of not less than 25 per cent of both their note and deposit liabilities. The banks of the sixteen cities other than New York, however, were allowed to keep one-half of their required reserves in the form of cash deposits with approved banks in New York City, the other half to be kept in lawful money in their own vaults. The banks of New York City, on the other hand, were required to maintain their entire legal reserves in the form of lawful money. All banks located outside of the seventeen designated cities were required to keep reserves equal to 15 per cent of their notes and deposits. Three-fifths of this amount might be in the form of deposits with approved banks in any of the seventeen cities previously mentioned, the other two-fifths to be held in lawful money in the banks' own vaults.

If the reserve of any national banking association should fall below the minimum percentage specified in the law, that bank was not to be permitted to make any more loans, discounts, or investments until the required percentage had been restored. Banks in any of the seventeen reserve cities were required to redeem the notes of banks for which they held deposited reserves, failure to do so subjecting them to insolvency proceedings by the Comptroller of the Currency in the same manner as though they had failed to redeem their own notes.

Nature of business. — Banks organized under the National Bank Act were permitted to carry on a general commercial banking business. They might accept deposits and make loans and discounts, but were not permitted to lend on the security of real estate, nor to purchase, hold, or convey real estate except such as was necessary to the transaction of their business or as had been received by way of security for debts previously contracted. Loans on the security of the bank's own stock were prohibited. No bank was permitted to lend an amount greater than 10 per cent of its capital stock to a single borrower, an exception being made of the discount of

bills of exchange drawn against actually existing values, and the discount of commercial or business paper actually owned by the person negotiating it.⁴

Relations with the government.—The Secretary of the Treasury was permitted to designate certain national banks as depositories for all government revenues except customs, such deposits to be secured by government bonds or in other satisfactory fashion. These depository banks were also to act as financial agents for the government when and as required.

In lieu of all other taxes by the Federal government, the banks were required to pay a tax of one-half of one per cent semi-annually upon their average circulation, and a semi-annual tax of one-fourth of one per cent upon average deposits and upon average capital not invested in United States bonds.⁵

The government guaranteed the note issues of the national banks. In case of default by a bank, the Comptroller of the Currency was authorized to declare the deposited bonds of the defaulting association forfeited to the Treasury. The Treasury would then pay all the notes of the failed bank in full, either canceling a like amount of bonds, or selling the bonds at auction to recover the money paid out to noteholders. The government also retained a first lien on all the remaining assets of the failed bank in the event that the proceeds from the sale of bonds should prove insufficient to reimburse the Treasury for the notes redeemed.

Charters were granted by the government for a period of twenty years from the date of incorporation, and provision was made for the conversion of state banks into national banking associations.

Development of the system.—The revised Act of 1864 was more satisfactory than its predecessor, and the number of national banks increased to 508 by October 1864. Nevertheless, the progress of the new system was not so rapid as was desired, chiefly because the state banks could still issue notes under less onerous conditions, in many instances, than

⁴ This restriction on loans to one borrower remained in force until 1906, when it was broadened to 10 per cent of the lending bank's capital *and surplus*.

⁵ The tax on deposits and capital was repealed by the Act of March 3, 1883.

those imposed on the national banks. This difficulty was remedied by the passage of a revenue measure on March 3, 1865, which contained a provision taxing the circulation of state banks at the rate of 10 per cent per annum after July 1, 1866. An amendment to the National Bank Act of the same date permitted state banks with branches to come into the national system and retain and keep in operation their branches, a provision designed to induce the conversion of state banks with branches to national banking associations, since the Act did not provide for branch banking by the institutions organized under it. The combined effect of these acts was to draw many of the state banks into the national system,⁶ the number of national banks increasing to 1513 on October 2, 1865, and to 1644 a year later.⁷

Subsequent amendments. — After the state bank notes had been taxed out of existence, the national banks furnished the country with a uniform bank note currency which was much more satisfactory than the miscellany of state bank issues which had preceded it. Some difficulties were encountered in the apportionment of the \$300,000,000 aggregate of national bank notes, and an *Act of July 12, 1870*, raised the limit to \$354,000,000, and provided for a new apportionment on the basis of the census of 1870.⁸ An inflationist measure, providing for an additional \$46,000,000 of bank notes, together with an increase in the amount of greenbacks to \$400,000,000, was passed in 1874, but was vetoed by the president.⁹

The next important piece of amendatory legislation was the *Act of June 20, 1874*. This act provided for a redistribution of \$55,000,000 of bank note circulation and for the voluntary retirement of circulation by the banks. More important, however, was the abolishment of all reserve requirements against notes, the banks instead being required to maintain with the Treasury a redemption fund in lawful money equal to 5 per cent of their circulation. The earlier

⁶ The conversion of state into national banks at this time is to be attributed almost entirely to the tax on state bank circulation. The author has been unable to find records of the conversion of any state banks with branches to national associations until a later date, although there may have been a few such.

⁷ *Finance Report, 1876*, pp. 271-272.

⁸ Conant, *A History of Modern Banks of the U. S.*, pp. 413-414.

⁹ *Ibid.*

reserve requirements were retained with respect to deposits, but the redemption fund with the Treasury was to be permitted to count as part of the legal reserve against deposits. From this time on, national bank notes were redeemable only at the issuing bank and at the Treasury in Washington.

The aggregate limit on national bank note issues had been necessitated by the fact that such notes were redeemable in greenbacks, which were themselves irredeemable. The *Act of January 14, 1875*, which provided for the resumption of specie payments, repealed the regulations relating to aggregate issues and the apportionment of notes, the banks being permitted to issue notes up to the limit of their paid-in capital if they so desired.

The *Act of March 3, 1887*, permitted the Comptroller of the Currency to designate cities with a population of 50,000 or more as reserve cities upon the application of three-fourths of the national banks located in such cities. New York was classed as a central reserve city, and other cities of a population of 200,000 or greater might apply to the Comptroller to enter this class. Under these provisions, St. Louis and Chicago were designated central reserve cities on March 18, and May 2, 1887, respectively, and the list of reserve cities was augmented in like fashion.¹⁰ Reserve requirements against deposits remained unchanged, but are presented here in tabular form for the sake of clarity.

TABLE II
PERCENTAGE OF DEPOSITS REQUIRED TO BE HELD AS RESERVES
BY NATIONAL BANKS · 1887-1913

	<i>Group A</i> <i>Central Reserve</i> <i>City Banks</i>	<i>Group B</i> <i>Reserve City</i> <i>Banks</i>	<i>Group C</i> <i>All Other</i> <i>Banks</i>
Total required reserve	25%	25%	15%
In own vaults	25%	12½%	6%
Redeposited:			
In group A banks . . .	....	12½%	.
In group A or group B banks . . . . .	..	..	9%

¹⁰ The Act of March 3, 1903, reduced the population limit for reserve cities to 25,000. At the time of the passage of the Federal Reserve Act, the number of reserve cities was 49.

The *Act of March 14, 1900*, provided for the redemption and refunding of certain bonds of the United States on a 2 per cent basis. The new "2 per cents" were given the note issue privilege, and the tax on notes secured by such bonds was placed at one-fourth of one per cent semi-annually, being retained at the earlier figure of one-half of one per cent on circulation secured by bonds bearing a higher rate than 2 per cent. The Act also stimulated national bank note issues by permitting the issuance of such notes up to the par value of the bonds used as security, provided the market value of the latter was not below par. In addition, the Act included a section authorizing the establishment of national banks in places of less than 3000 inhabitants with a minimum capital of \$25,000.

Growth of national banking resources.—After July 1, 1866, when the tax on state bank circulation became effective, the national banking system enjoyed a steady growth up to the close of the period under discussion. The number of banks, which had been 1644 on October 1, 1866, increased to 7509 on October 21, 1913. The increase in national banking resources between these two dates was even more marked, total resources standing at more than \$11,000,000,000 in October 1913, as compared with about \$1,500,000,000 at the earlier date. Table III shows the changes which occurred in certain selected items from the reports of the national banks at intervals throughout the period.

Certain facts are observable from the data here given. The banks of the system strengthened their financial position by the retention of earnings in the business. Surplus plus undivided profits rose from about 20 per cent of capital stock in 1866 to 100 per cent in 1913. On the other hand, the stockholders' equity¹¹ less circulation fell from nearly 40 per cent of individual deposits in 1866 to about 22 per cent in 1913, so that, other things being equal, individual depositors received a greater margin of protection from the stockholders' equity in the earlier year than they did at the end of the period.

Perhaps the most significant development shown by the data is the increasing importance of deposits as compared

¹¹ Capital Stock, surplus, and undivided profits.

with notes in the course of the period. In 1866 circulation amounted to approximately one-half of individual deposits. By 1913 the proportion had fallen to about one-eighth. Although checking deposits were used rather extensively in the larger cities at the time of the establishment of the national banking system, the ability to issue circulating notes was nevertheless of prime importance in the conduct of a commercial banking business, especially in the rural districts. With the passage of time, the note issue function came to occupy a less significant place in banking affairs, while that of deposits became increasingly important.

TABLE III

ITEMS FROM STATEMENTS OF NATIONAL BANKS : 1866-1913
(In thousands of dollars)

<i>Date *</i>	<i>No. banks</i>	<i>Capital Stock</i>	<i>Surplus</i>	<i>Undivided Profits</i>	<i>Notes</i>	<i>Individual Deposits</i>	<i>Resources</i>
1866	1,644	415,472	53,359	32,593	280,254	564,617	1,526,063
1870	1,615	430,399	94,061	38,609	291,799	501,408	1,510,713
1875	2,088	504,830	134,356	52,965	318,350	664,580	1,882,209
1880	2,090	457,554	120,519	46,140	317,150	873,538	2,105,787
1885	2,714	527,524	146,625	59,336	268,870	1,102,372	2,432,913
1890	3,540	650,447	213,564	97,007	122,928	1,564,845	3,141,487
1895	3,712	657,135	246,448	90,440	182,482	1,701,054	3,423,629
1900	3,871	630,299	261,874	127,595	283,949	2,508,249	5,048,138
1905	5,757	799,870	417,758	202,536	468,980	3,820,682	7,472,351
1910	7,173	1,002,735	648,268	225,769	674,822	5,145,658	9,826,181
1913	7,509	1,059,403	726,302	281,276	727,079	6,051,689	11,301,558

* Date of call nearest October 1st.

Source : Annual Report of the Comptroller of the Currency 1915. Table 61.

Finally, it should be noted that the growth in circulation was highly irregular. The item fell from over \$318,000,000 in 1875, to less than \$123,000,000 in 1890, thence rising steadily to \$727,000,000 in 1913: When it is remembered that the national banks were the only institutions with note-issue power during this period, the peculiar movement of the circulation item points clearly to a defective system of note issue, a fact which will receive further comment later.

National banks commercial institutions.—The restrictions which were imposed by law upon the operations of the national banking associations had the effect of making them strictly commercial banking institutions. Their inability to

purchase or to lend on real estate security for long periods, coupled with fairly high reserve requirements against *all* individual deposits, made it impossible for them to pursue a savings-bank business to any great extent. Nor were they permitted to exercise fiduciary powers prior to 1914. They were, however, better suited to the transaction of a commercial banking business than the state banks, and dominated the commercial field in most sections of the country up to the close of the period under consideration.

State banking developments : 1863-1913.—For a time after the passage of the National Bank Act, state banking was practically non-existent. In 1861, there had been 1601 state banks in operation,¹² and, although some decline occurred within the next few years, it was not until the tax on state bank note issues had become effective that the heaviest mortality took place among institutions of this class. By 1868, the number of state banks had fallen to 247. This marked the low point and, from 1869 on, the number began to increase, although the increase did not attain very significant proportions until after 1880. At the latter date, in addition to the state banks, there were in operation a considerable number of unincorporated private banks, a very much smaller number of savings banks, and a sprinkling of trust companies. With the exception of the private banks, all these groups increased rapidly in size throughout the remainder of the period, the most rapid increase in state banks occurring after 1886, while the number of trust companies remained comparatively small until after the turn of the century. Table IV shows the number of institutions in each of these various groups, together with the number of national banks, at five-year intervals, from 1879 to 1914.

From the point of view of numbers alone, it is clear that the national banks were far surpassed by the state-chartered and private institutions at the close of the period, the latter aggregating 19,240 in 1914, as compared with 7,493 national banking associations. Comparison of resources, however, discloses very different results. Total resources of all state banks (including private banks) in 1914 amounted to

¹² *Finance Report*, 1876, pp. 204-205.

\$15,489,207,260, while national banking resources totaled \$11,564,497,260,¹³ or 75 per cent of the state bank total.

TABLE IV
NUMBER OF BANKS, BY CLASSES

	1879	1884	1889	1894	1899	1904	1909	1914
National banks.	2,048	2,625	3,239	3,770	3,583	5,331	6,893	7,493
State banks. . .	813	1,017	2,097	3,705	4,253	6,984	11,292	14,512
Private banks. .	2,545	3,458	4,215	3,844	4,168	5,484	4,407	1,064
Trust companies	37	44	63	228	276	924	1,079	1,564
Savings banks. .	639	636	849	1,024	987	1,157	1,703	2,100

Source of data: Savings banks in all years and all groups of banks in 1914—Annual Reports of the Comptroller of the Currency. All groups except savings banks 1879-1909: Barnett, *State Banks and Trust Companies*, p. 201.

State banking legislation.—It is quite impossible to present anything like an adequate discussion of state banking legislation in the period preceding 1914 in concise fashion. The diversification of details in the various state laws regulating banking cannot be set forth in the brief space which can here be devoted to the subject. Nevertheless, certain broad movements in the development of banking legislation which took place in a majority of the states may be conveniently summarized.¹⁴

Aside from laws governing savings banks, state banks were relatively free from legislative control and restriction until well along in the eighties. In some states, the laws which had governed the organization and operations of state banks in the pre-Civil War period remained on the statute books, but as they had been passed chiefly with the object of regulating note issues of the banks, they naturally had little applicability to institutions which were prevented from issuing notes by the national tax of 10 per cent on state bank circulation. In fact, for a good many years after the establishment of the national banking system, the state legislatures retained the notion that banking legislation was necessary

¹³ Data are from the Annual Reports of the Comptroller of the Currency.

¹⁴ The bulk of the material contained in the following paragraphs has been obtained from Barnett, *State Banks and Trust Companies*, which was written for the National Monetary Commission in 1910 and was published in 1911. Professor Barnett's discussion, therefore, covers the development of state bank and trust company legislation practically up to the close of the period under discussion in the text.

for the protection of noteholders only, and banks of deposit were consequently permitted to be established in many states without substantial regulation by the state. As time went on, however, the desirability of state regulation for banks of deposit and discount became more and more evident, and, by the close of the period here considered, an extensive body of state banking legislation had been placed on the statute books. It will be worth while to describe briefly a few of the more general developments of the state banking laws toward the close of the period.

1. *Incorporation and capital requirements.*—By 1910, state banks and trust companies were almost universally incorporated under general banking laws, in a manner similar to the incorporation of national banks under the National Bank Act. This had become the prevailing method since 1887, when the regulation of deposit banking by the states began to assume new significance. In the twelve years preceding, 1875–1887, the majority of state institutions had been organized under the ordinary business incorporation laws, while from 1865 to 1875 a large proportion of the banks established had been incorporated under special acts of the state legislature.¹⁵ Even in 1910, the older methods of incorporation under special acts or under general business incorporation laws were still practiced in a few states, but the system of free banking under general banking laws was that typically followed in all sections of the country.

In any system of free banking, meeting the capital requirements of the law is, as a rule, the most important incident to the establishment of a bank. The state laws were rather diverse with respect to the minimum capital required, the amount varying all the way from \$5000 in North Carolina to \$50,000 in New Jersey for banks located in the smallest towns, with \$10,000 as the minimum in a majority of states. For trust companies, on the other hand, the minimum capital required was much larger in a considerable number of states. Moreover, most of the states had adopted some plan of graded capital requirements, so that the minimum specified applied only to the smallest banks or to banks in towns of the smallest size. About all that can be said by

¹⁵ *Ibid.*, p. 34.

way of generalization is that the minimum requirement for state banks was, on the whole, somewhat smaller than the corresponding requirement for national institutions.

Since the majority of states provided for the more or less prompt payment of the entire subscribed capital of banks, the general rule of law that unpaid stock subscriptions constitute a sum for the protection of creditors was of no significance. Many of the states, however, when not prohibited by constitutional restrictions, furnished added protection to depositors by imposing a statutory liability, in addition to the amount subscribed, on holders of bank stock. This took the form of a double liability in all but two instances, as in the case of national bank stockholders.

2. *Reserves.*—With the recrudescence of state banking legislation about 1887, little attention was given to the subject of minimum reserve requirements for a considerable period. By 1910, however, all but eleven of the states and territories which incorporated banks required some sort of reserve to be held against deposits, although both the amount and composition of these legal reserves varied widely.

It will be recalled that the National Bank Act made no distinction, in reserve requirements, between different classes of individual deposits, the same reserve being required for all classes. Thirteen of the states and territories followed a similar procedure. In a second group of states, 14 in number, a reserve was required against demand deposits (or their approximate equivalent), but not against time and/or savings deposits. One state reversed this procedure, requiring a reserve against savings deposits, but not against demand deposits. In the remaining states, different minima were specified for demand and time deposits respectively, the reserve being smaller for the latter than for the former. As for demand deposits, the proportion of reserve required in all groups of states varied from 10 to 25 per cent, with 15 per cent the most usual figure; while in those states which distinguished between demand and time deposits, the required reserve against the latter varied from 4 to 15 per cent, 10 per cent being most common.

In the vast majority of states, the reserve regulations for trust companies were the same as for state banks, and in the

majority of states also, the specified percentages applied to banks in all localities, although there were a few exceptions to each of these generalizations.

The composition of the reserves required of state banks was, in most cases, cash in vault and balances in other banks. As to the proportion of each, there was wide diversity, the banks in some states being allowed to suit themselves in this regard, in other states the proportion of balances being greater for reserves against savings or time deposits than against demand deposits, and in still other states the proportions being fixed by law and made the same for all classes of reserve. Finally, four states permitted the reserves of state banks to consist wholly or in part of bonds, while a number of other states also permitted some proportion of bonds to be included in the reserves of trust companies.

Under such diverse conditions as those just depicted, generalization is difficult. It may be stated, however, that the reserve requirements of the state laws were considerably less rigid, generally speaking, than those of the National Bank Act. Furthermore, very few state laws designated any particular banks as reserve depositories, so that the tendency to concentration of reserves in certain cities was less marked in the state systems than in the national banking system.

3. *Restrictions on lending.*—Following the National Bank Act, most of the state banking laws came to include restrictions on the amount which a bank might lend to a single customer. In a few instances, the restriction was more rigid than that of the national law (as amended in 1906), and a few other state laws carried the same restriction as the National Bank Act, but in the majority of cases the state banks were less rigidly restricted in this respect than the national institutions.¹⁶

The point at which state banking legislation departed most widely from the National Bank Act was in the matter of real estate loans. The state laws in almost every instance permitted banks and trust companies to make loans of this type, while such loans by national banks were forbidden entirely. Although the proportion of capital and/or deposits which

¹⁶ According to a compilation of Professor Barnett, the limitation on loans to one borrower was less rigid in 24 of the 33 states included than under the National Bank Act. *Ibid.*, p. 88.

could be thus loaned varied considerably from state to state, sufficient leeway was permitted in most instances so that the action of the banks in making loans on real estate security was not greatly hampered. Since most of the state banks and trust companies held substantial time or savings deposits, the permission to grant real estate loans, up to a certain point at least, was justified.

4. *Branches.*—In one other respect the laws of some of the states, in 1910, were less restrictive than the National Bank Act. Some ten or a dozen states permitted banks to establish branches, while the national law gave no such permission except in the case of a consolidation with a state bank operating branch offices. As a matter of fact, however, this consideration was of little moment at the time in question, as very few branch systems existed, even in the states in which branch banking was definitely permitted.

5. *Supervision.*—With the growth of state banking legislation, there came as a natural accompaniment a development of banking supervision. Legal regulations are themselves of slight value without provision for their enforcement. By 1910, supervision of state banks and trust companies had become fairly efficient in a majority of the states, the tendency being to concentrate supervisory powers in the hands of a single state official variously known as superintendent, supervisor, or commissioner of banks.

The duties of the supervisor, in the usual case, consisted in seeing that the rules regarding incorporation were complied with and the capital paid in as stipulated in the law ; requiring periodical reports of condition ; conducting examinations one or more times per year ; performing certain functions—varying in importance in different states—connected with the liquidation of failed banks ; and generally seeing that the regulatory and restrictive provisions of the banking law were complied with. In some states, also, the superintendent or supervisor was given certain discretionary powers in regard to permitting the establishment of new banks in communities already served by existing banking institutions.

The banking system in 1913.—The foregoing accounts of the state and national systems just prior to the passage of

the Federal Reserve Act will shed some light on the banking position of the country as a whole at that time. Although the number of state banks and trust companies was large, the functions performed by these institutions supplemented, to a large extent, the services rendered by the national banks, instead of supplanting them. It is true that in a few large financial centers, particularly New York City, the large trust companies with banking powers were in direct competition with the national institutions. Throughout most of the country, however, the state institutions either operated in places too small to support a national bank,¹⁷ or carried on chiefly savings and trust functions which were not permitted to the national institutions.¹⁸ In this connection it may be noted that a considerable number of national banks in the cities organized affiliated state institutions to take advantage of the trust and savings business. In the small towns, on the other hand, the state banks could do business more effectively than the national associations because of their ability to grant loans secured by real estate.

The banking system of the United States in 1913 was thus composed of many thousand independent banks without branches, the national banks being specialized commercial institutions and doing the bulk of the commercial banking of the country, while the state banks and trust companies, although doing a commercial banking business in some instances, for the most part leaned heavily toward a savings and trust business. One result of this system of widely scattered individual banks was the establishment of a vast network of correspondent relationships, because both the state and national institutions, in all but a few instances, kept part of their reserves in the form of deposits with other banks, and because some such relationship was essential in a system with no central bank to permit the collection of out-of-town checks and items and to care for other distant business. It was this contact with other banks, established

¹⁷ In 1909, out of a total of 11,590 state banks 5103 had a capital of less than \$25,000—the minimum required for national banks in places of less than 3000 inhabitants—and another 3102 banks had a capital between \$25,000 and \$50,000. *Ibid.*, p. 254.

¹⁸ The law did not prohibit national banks from accepting savings deposits, but the high reserve requirements coupled with the inability to make real estate loans made a savings business practically out of the question.

through a variety of correspondent relations, which prevented individual institutions from working entirely independently of one another and gave some semblance of system to the operations of the 27,000-odd banks of the country.

Defects of the system. — Although the banking system of the United States, as described in the preceding pages, functioned moderately well in normal times, it was nevertheless defective in a number of respects. The major drawbacks were an inelastic system of note issue, a rigid and decentralized reserve organization, an unsatisfactory mechanism for the collection of out-of-town checks, poor working relations with the Treasury, and a lack of centralized control.

Since it was these defects which finally led to the passage of the Federal Reserve Act, they will be considered in some detail in the following chapter.

REFERENCES

(The following references are for Chapters VII and VIII)

- Barrett, G. F. *State Banks and Trust Companies Since the Passage of the National Bank Act*. Washington (National Monetary Commission). 1910.
- Conant, C. A. *A History of Modern Banks of Issue*.
- Davis, A. McF. *The Origin of the National Banking System*.
- Dunbar, C. F. *The Theory and History of Banking*.
- Huntington, A. T. and Mawhinney, R. J. *Laws of the United States Concerning Money, Banking, and Loans, 1778-1909*. Washington (National Monetary Commission). 1910.
- Kinley, D. *The Independent Treasury of the United States and Its Relations to the Banks of the Country*.
- Noyes, A. D. *History of the National Bank Currency*. Washington (National Monetary Commission). 1910.
- Sprague, O. M. W. *History of Crises Under the National Banking System*. Washington (National Monetary Commission). 1910.
- Sprague, O. M. W. *Banking Reform in the United States*. Cambridge. 1912.
- Welldon, S. A. *Digest of State Banking Laws*. Washington (National Monetary Commission). 1910.
- Annual Reports of the Comptroller of the Currency*.

CHAPTER VIII

DEFECTS OF THE NATIONAL BANKING SYSTEM

Introduction.—Of the defects noted at the end of the preceding chapter, the three that attracted most attention were the inelasticity of note issues, the lack of a sound system for the collection of out-of-town checks, and the unsatisfactory organization of reserves. These particular defects will therefore be given detailed treatment in the order named, to be followed by a brief discussion of other drawbacks at the end of the chapter.

NATIONAL BANK NOTES

Parity.—At this point it is necessary to anticipate briefly certain material which is discussed more fully in a later chapter (Chapter XI). It is there argued that a satisfactory system of bank note issue must meet three requirements: parity with the standard money, adequate security to protect the holder, and a proper degree of elasticity in order to keep the volume of note issues adjusted to the needs of business. We may now consider national bank notes from the standpoint of each of these requirements. No objection can be advanced against national bank notes so far as their parity with standard money was concerned. They were redeemable in lawful money at the issuing bank and at the Treasury in Washington. Since the issuing banks were numerous and were spread over a wide territory, the provisions mentioned might not always have been sufficient to keep the notes at par in all parts of the country, but they were also valid tender in the payment of taxes and all public dues except duties on imports, and they had to be received at par by any national banking association. These valid tender powers, together with the provisions for redemption, proved adequate to keep national bank notes equal in value to standard money. Con-

sequently, the notes met the requirement of parity, *per se*, in satisfactory fashion.

Security.—National bank notes were obligations of the United States government and as such fell into the class of guaranteed issues. This guarantee constituted the security to individual holders of such notes and could scarcely be improved upon from their standpoint. The security to the government consisted of the bonds which had been deposited against circulation with the Treasury Department. In case of default by a national bank, the deposited bonds were forfeited to the government and might be retired or sold in the market at auction to reimburse the Treasury for the expense incurred in redeeming the notes of the failed bank. The value of such bonds was always inflated because of the fact that they were in great demand by banks wishing to issue notes. Had any widespread failure of national banks occurred, a considerable proportion of these bonds would have been sold on the market with a consequent marked decrease in their market value. No such catastrophe took place, but, in any event, the government was further protected by a first lien upon all of the remaining assets of failed banks if it cared to exert its legal right in this connection at the expense of the banks' depositors. It thus appears that both the individual holder of national bank notes and the government were adequately protected against loss by the provisions regulating the security to be maintained against national bank note issues.

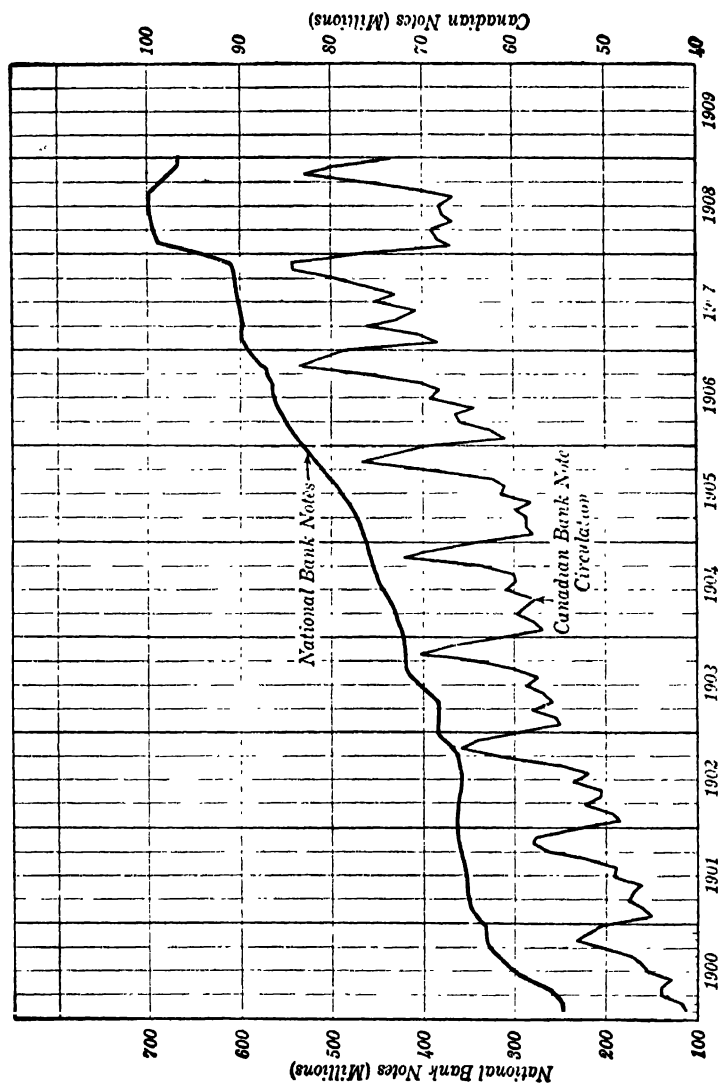
Elasticity.—With respect to elasticity, our judgment of national bank notes must be decidedly less favorable than in the two previous connections. In the first place, since the notes had to be secured by certain limited issues of United States bonds, it follows that the aggregate amount of national bank notes, which could not exceed the total par value of the bonds available as security, had to vary perforce with any variation in the quantity of bonds. In any event, the amount of bonds set a rigid upper limit to the possible expansion of note issues. Secondly, as regards the issues of individual banks, factors might arise which were wholly unconnected with the needs of business for hand-to-hand money, and which would cause fluctuations in the amount of

such issues. When a bank was subjected to demands for hand-to-hand money, it would meet those demands by paying out either bank notes or lawful money, depending upon which was the more profitable and the less troublesome. Frequently it has been thought that the use of national bank notes instead of lawful money for this purpose was the more profitable procedure for the bank to take because the bank then obtained the interest on the bonds which would not otherwise be obtained, but this was not necessarily the case. Presumably, the national bank notes, when issued, were to be paid out to borrowers who wanted hand-to-hand money. If no notes were issued, the bank would have to meet this demand by paying out lawful money, and would receive merely the interest on the amount thus loaned. The additional profit to be made by issuing national bank notes was the difference between this figure and the interest on the investment in United States bonds, plus interest on the notes loaned, less the tax on circulation, less the expense in connection with engraving, printing, and shipping the notes, less interest on the five per cent redemption fund held in the Treasury.

The bonds bearing the circulation privilege bore interest at the rate of 3 or 4 per cent prior to 1900, while after that year most of the bonds available as security for national bank note issues carried a 2 per cent rate. The lower rate was largely offset, however, by the ability of national banks to issue notes up to 100 per cent of the bond security after 1900, as contrasted with 90 per cent before that year.

For purposes of illustration, consider the case of notes issued on the security of 2 per cent bonds in the period following the year 1900. The semi-annual tax on average circulation amounted to one-fourth of one per cent. Total expenses, including sinking fund payments and loss of interest on the redemption fund, averaged at least another one-fourth of one per cent semi-annually. If the bonds were purchased at par, the net profit over and above that which would have been made from the loan of lawful money was not more than one per cent per annum, provided that all the notes were loaned out to borrowers. If the bonds were purchased at a price above par, the profit obtainable was still

CHART I. NATIONAL BANK NOTES OUTSTANDING AND CANADIAN BANK NOTE
CIRCULATION, 1900-1908



Source: Banking Reform, pp. 130-132.

smaller. For example, with Consols of 1930 selling at a trifle under 103, the net profit on notes secured by these bonds would have been between .3 and .4 of one per cent.¹ At any higher price, the extra profit would disappear or be converted into a loss. An increase in the market price of the bonds not only made it less profitable for the banks to take out new issues, but also encouraged the retirement of certain issues already outstanding. To illustrate, if a bank had bought government bonds to secure note issues at 100, the profit to be made would have been approximately one per cent per annum. If, then, the bonds had risen in price to 110, the bank would have found an incentive to retire its notes and sell the security behind them at a 10-point profit. In so doing, it would, to be sure, no longer have obtained the annual one per cent profit from the use of the notes in place of lawful money, but the profit of 10 points at which the bonds had been sold would more than make up for the loss of the annual profit on the notes. Other price relations might be given as bearing on the profitability of national bank note issues, but the above are sufficient to show that such issues were governed by the situation in the market for government bonds with the circulation privilege to a greater extent than by the needs of business for hand-to-hand money.

Historical performance.—Historically, then, the national bank note can give no satisfactory account of itself as an elastic element in the currency. These notes showed no evidence of seasonal elasticity such as that possessed by the asset-secured bank notes of the Canadian system. A glance at Chart I, page 167, which depicts the monthly movement of national and Canadian bank note issues from 1900–1908, gives graphic proof of the lack of seasonal elasticity in the national bank note issues. In fact, the red tape surrounding the procuring of additional notes at any time effectively prevented any rapid expansion to meet seasonal needs. Seasonal expansibility not being in evidence, the question of subsequent contraction did not arise. It may be noted, however, that the requirements surrounding the issuance and retirement of national bank notes provided no legal motive

¹ See the *Report of the Comptroller of the Currency*, 1926, p. 170.

for the banks to send these notes home for redemption, while the large number of issuing banks, together with the limited profit to be obtained by issuing notes, prevented the profit motive from operating on any given bank to send the notes of other banks home for redemption and issue its own notes in place of those returned to the issuing banks.

With regard to longer time movements, the national bank note issues did not expand and contract to meet business needs, but varied with the price of government bonds and the administration of the public debt. There are two outstanding examples of the connection between bank note issues and the administration of the debt in the history of the national banking system. The first occurred in the decade following the year 1880. The Treasury, finding itself in the possession of large surplus revenues in a number of successive years, proceeded to devote them to the redemption of the public debt. By 1887, the portion of the public debt which was redeemable at par had been retired, and the following year the Treasury, as authorized by law, began to buy up the remaining government bonds at the market price. This demand of the Treasury drove up the price of the bonds and presented an alluring opportunity to the national bank managements to retire their circulation and dispose of the bonds at a tremendous profit, an opportunity which they did not resist. "A few years more of wholesale redemptions, under the methods employed in 1888, and the entire debt would be extinguished. This result, except for the waste of public funds involved in the constantly advancing premium, would of itself have been no misfortune. But these very redemptions were extinguishing the bank-note currency, thus actually contracting circulation. . . . An excessive circulating medium is an undoubted evil; but a law which draws into public vaults, and keeps in idleness, seven per cent of the circulation every year is a source of possible mischief whose evil influence can scarcely be exaggerated."² Thus, in the case cited, the reduction of the public debt seriously interfered with the bank note circulation of the country.

The other instance which we have referred to occurred

² Noyes, *Forty Years of American Finance*, p. 126.

in 1900. The act of March 14, 1900, provided for the funding and refunding of several loans of the national government upon terms less favorable than might have been obtained had not the interests of the national banks interfered. Professor Dewey, in considering the refunding provisions of this act, states :³ "Certainly the opportunity for payment of the debt was too long deferred, as was subsequently illustrated in purchases of bonds at high premiums. It is fair to conclude that the funding scheme was intended rather to relieve the difficulties of banking than to offer the best possible management of the finances over a long series of years." Referring again to the chart, the rapid increase in national bank note issues after 1900 reflects the effects of the legislation of that year rather than any real increase of demand on the part of business for bank note currency.

With respect to past performance, the national bank notes have proved far from satisfactory. After the amendment of 1874, which relieved the banks of the necessity of keeping sizeable reserves against bank note issues, the quantity of circulating notes was practically unrelated to the amount of available lawful money, being rather strongly influenced by the amount and price of outstanding United States bonds. There can be no question but that inelasticity of national bank notes was a serious defect in the operation of the banking system prior to 1914.

THE COLLECTION OF CHECKS

Local clearing houses.—The collection of checks on other banks in the same community has been carried out for many years in this country by means of local clearing houses. Since the establishment of the New York Clearing House in 1853, the banks of nearly every city of any size or importance throughout the United States have adopted a clearing organization of some sort. Under this method each member of the clearing house periodically⁴ sends a representative to meet with representatives of the other banks. Each representative brings with him all of the checks and other items on every other bank that his bank has received

³ *The Financial History of the United States* (New York 1922), p. 472.

⁴ Daily in all of the larger cities.

since the last clearing. The total of checks that each bank has against all of the others is then canceled against the total that all of the others have against it, differences or balances only being paid in cash or reserve funds.

While the term "clearing" refers to the *cancellation* of conflicting claims, it is obvious that each bank collects its checks on other banks in the course of the clearing process. The latter banks merely pay these checks, in whole or in part, by means of checks or claims against the former instead of by means of cash.

The only alternative to the clearing method would be for each bank to collect separately its checks on every other bank in the community. To do this would only enhance the expense and confusion of the collection process, as is well shown by the following description of the manner in which local checks were collected by the New York banks before the establishment of the Clearing House in 1853.⁵

In the daily course of business each bank received checks and other items on each of the other banks, which had to be presented for collection. All such items on hand were assorted and listed on separate slips at the close of the day, and items coming in through the mail on the following morning were added at that time. To make the daily exchanges each bank sent out a porter with a book of entry, or pass book, together with the items to be exchanged.

The receiving teller of the first bank visited entered the exchanges brought by the porter on the credit side of his book and the return exchanges on the debit side, who then hurried away to deliver and receive in like manner at the other banks. It often happened that five or six porters would meet at the same bank, thereby retarding one another's progress and causing much delay. Considerable time was consumed in making the circuit. Hence, the entry of the return items in the books of the several banks was delayed until afternoon, at an hour when the other work of the bank was becoming urgent.

A daily settlement of the balances was not attempted by the banks, owing to the time it would have required, but they informally agreed upon a weekly adjustment, the same to take place after the exchanges on Friday morning. At that time the cashier of each bank drew a check for each of the several balances due it, and sent a porter out to collect them. At the same time the porter carried coin with which to pay the balances due by his bank. After the settlement had been made, there was a meeting to adjust differences and bring order out of chaos.

The advantages of the clearing method were so apparent

⁵ Cannon, J. G., *Clearing Houses*, pp. 148-149.

that bankers throughout the country soon adopted it, and by the time that the national banking system was well under way, local checks were being efficiently and easily collected through clearing houses in all of the more important cities of the country.

Other functions.—In addition to their primary function of clearing checks, many of the clearing house associations in this country perform—or have performed in the past—other useful services for their members. The most common of these special functions have been noted by Professor Spahr as follows: ⁶ (1) extending loans to the government in time of war, (2) rendering assistance to weaker members in periods of stress, (3) fixing uniform rates of interest on deposits, (4) fixing uniform rates of exchange and of charges on collections, (5) fixing reserve requirements, (6) examining member banks, (7) gathering credit data for members, (8) publishing statements of condition and of the amount of clearings of member banks, (9) participating in annual conferences, and (10) issuing clearing house loan certificates in times of strain.

This rather wide list of services will indicate the fact that the clearing houses, at least in the larger cities, have been more than mere meeting places for the cancellation of checks. In the issuance of clearing house loan certificates, for example, the New York and some of the other more important clearing houses rendered valuable service in periods of strain prior to the establishment of the Federal Reserve System. These were interest-bearing certificates issued by members of the clearing house and used instead of cash to pay debit balances at the clearing. The acceptance of such certificates by the creditor banks in place of cash helped to conserve the reserves of the banks with unfavorable balances and assisted in tiding them over the critical period.⁷

The collection of out-of-town checks.—In the collection of checks and drafts on banks in other localities, the process must almost necessarily be carried out by the banks for their customers. The individual recipients of such checks could

⁶ *The Clearing and Collection of Checks*, p. 131.

⁷ For a detailed discussion of the use of clearing house loan certificates in the United States, see Spahr, W. E., *op. cit.*, Chapter V.

scarcely present them to the drawee banks for encashment without the intervention of some agency to assist them in so doing. These individuals' own banks are the institutions most naturally and best suited to undertake this service. The banks themselves, however, need a centrally directed system if this function is to be performed efficiently and quickly. The absence of such a system prior to 1914 was one of the major defects of the national banking system, as the following description and analysis will demonstrate.

The collection process under the national banking system.—With the development of the custom of paying out-of-town debts by personal check, the banks of the United States, especially those located in the larger financial and commercial centers, received among their deposits ever-increasing numbers of checks drawn on banks outside of their immediate locality. It accordingly devolved upon the banks receiving such checks on deposit to collect them from the banks on which they were drawn.

The most simple and straightforward method of making these collections would have been to mail the checks directly to the drawee banks and let the latter remit the amount of the checks so received. The failure of the banks to follow this logical procedure resulted from the practice on the part of the drawee banks of exacting an exchange charge from the banks sending in such checks for payment. That is, instead of remitting the full face amount of the checks, the drawee banks would usually retain a small amount, equal to from $\frac{1}{10}$ to $\frac{1}{4}$ of 1 per cent of each \$100 or fraction thereof, the difference being remitted to the banks sending in the checks. The drawee banks defended this practice on fairly plausible grounds. Remittance had to be made either by the shipment of currency, which was expensive, or by a draft on New York or some other financial center. The latter method, which was the one generally followed, was also claimed to entail some expense to the drawee banks since it made necessary the maintenance by them of deposit accounts in banks in one or more financial centers, thus tying up a considerable proportion of their assets in a form which yielded but a low rate of return.

While these arguments were in part justified, the banks

receiving out-of-town checks on deposit were nevertheless faced with a loss of income by reason of exchange charges which it was to their interest to avoid if possible. The most reasonable solution of the difficulty, that of passing the charge on to the depositors of out-of-town checks, was generally precluded by the competition of the banks for deposits. Some other arrangement was therefore necessitated. The method finally arrived at was the collection of non-local checks through correspondent banks.

Collection of checks through correspondents.—This arrangement resulted in a wide variety of agreements among correspondent banks. Banks in different cities frequently agreed to collect for each other at par all checks drawn on banks located in their respective vicinities or throughout a designated territory. Country banks at times agreed to remit at par for checks sent them for payment by the city banks with which they had correspondent relations. More frequently, however, country institutions continued the practice of charging exchange even against their city correspondents, but in such an event they were expected to maintain balances with these city banks sufficiently large to compensate the latter for the loss resulting from the payment of the exchange charges. The city banks, on the other hand, practically always stood ready to collect their country correspondents' out-of-town checks at par, and thus found it necessary to keep balances at various points in order to collect these items without exchange deductions. The banks of some cities, probably overestimating the value to themselves of the deposits of other banks, made a bid for such balances by offering to collect out-of-town checks for depositing banks at par over a wide territory including a considerable number of states.

The country banks of various districts naturally established correspondent relations, for purposes of check collection, with banks in the financial centers to which their sections were tributary. "Thus the banks of New England, with few exceptions, selected Boston and New York as their reserves cities. Those in the middle states selected New York and Philadelphia; the south Atlantic States selected Baltimore and New Orleans; the middle West was divided

among Cincinnati, Cleveland, and Chicago, although Chicago exchange occupied the important place. All Michigan drew on Detroit. St. Louis was the center for the southern Mississippi valley and the Southwest; San Francisco for the Pacific Coast. But few were the banks that did not have at least one New York correspondent, New York exchange being in the greatest demand, as New York was and is the commercial and financial center of the country. Besides corresponding with the central reserve and reserve city banks, each bank corresponded with from three to a dozen banks in neighboring counties, among which the checks of each circulated freely and with which settlements were made weekly or semi-weekly, as the case supposedly required.”⁸

Defects of the system.—The procedure followed in the collection of out-of-town checks gave rise to a number of drawbacks which held a prominent place among the weaknesses of our earlier banking system. Some of the more important of these evils were the following :

(1) In the first place, the proportion of bank assets held in the form of balances with other banks was much larger than would have been either necessary or desirable under a more efficient system. Even the small country banks found two or three accounts with correspondents necessary, while the number of correspondents of the large city institutions often ran into the hundreds or even thousands.⁹

(2) A second defect resulted from the fact that banks receiving checks for collection from their correspondents followed the practice of giving immediate credit for such checks although some time was certain to elapse before they were actually collected. Since many of the banks were allowed to count balances with other institutions as part of their legal reserves, a considerable portion of the float (i.e., checks in the process of collection) was included in the legal reserves of the banks, an evil which will receive more detailed comment in the following section of the chapter.

(3) In the third place, the collection of checks in the manner described was excessively costly, and the cost was unfairly distributed. The large city banks, which often

⁸ *Ibid.*, p. 100.

⁹ Watkins, L. L., *Bankers' Balances*, p. 103.

agreed to pay exchange charges to their country correspondents while yet collecting checks for the latter at par, were frequently forced to absorb heavy expenses which were only partly offset by the so-called compensating balances maintained with them by the country institutions. Thus the city banks had either to suffer a loss of income or to recoup themselves by making higher charges than would otherwise have been necessary for various banking services not connected with the collection of checks. In either case, the country banks were allowed to make an undue profit from exchange charges at the expense of the city institutions or their customers.

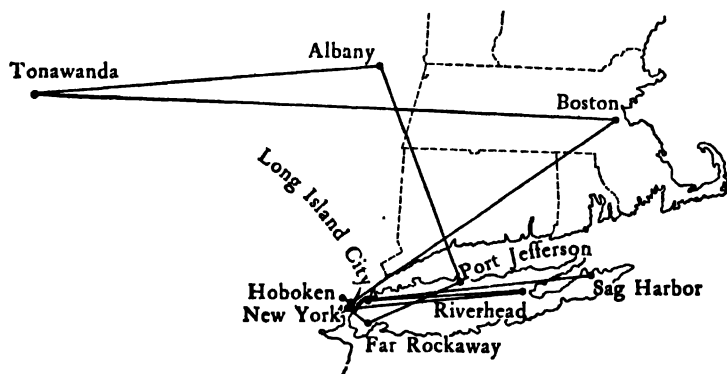
The clearing house associations in some cities endeavored to assist their members to recover some of the loss arising from the collection of out-of-town checks by requiring each member to levy a charge against the depositors of such items. This was often referred to as an *exchange charge*, but it will make for clarity if it is here termed an *interest charge*¹⁰ to distinguish it from the exchange charges levied by drawee banks upon other banks sending checks to them for payment. This interest charge was perfectly legitimate since it was designed merely to cover the loss of interest suffered by the banks between the time of the deposit of out-of-town checks and the time of their payment. Such checks are not cash, and if a bank gives the depositor immediate credit on items of this sort, it is really extending him a loan of the funds during the period of collection and is entitled to charge interest on these amounts. The time required to collect out-of-town checks through correspondents, however, was often unduly extended, as will be shown directly, so that an interest charge of the sort described was excessive in the circumstances. Thus the depositors of out-of-town checks paid a penalty because of the inefficiency of the prevailing collection methods.

(4) Perhaps the most serious defect arising out of the system of collections then prevailing was the roundabout routing of checks in the process of collection. This was

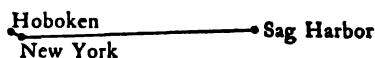
¹⁰ Rodkey—in *The Banking Process*—uses the term “service charge” in this connection, but this is easily confused with the common bank service charge on small accounts, so that it is not used here.

a natural result of the attempt on the part of banks having out-of-town checks to collect to avoid the payment of exchange charges on such items by sending them to correspondents for collection instead of mailing them directly to the drawee banks for payment. If all of the banks had sorted all of their out-of-town checks according to the locations of the drawee banks and had sent each check or bundle of checks to a correspondent in the immediate neighborhood of the drawee for collection, the system might have worked fairly well. At times, of course, this procedure was followed, but in many instances banks would send bundles of checks drawn on institutions in various sections of the country to any correspondent with which they

ROUTE OF A CHECK AN ACTUAL INSTANCE



UNDER THE FEDERAL RESERVE SYSTEM



DISTANCE 93 Miles
COLLECTION TIME 2 Days

BEFORE THE FEDERAL RESERVE

Check on Sag Harbor Bank deposited in Hoboken Bank

Sent to N. Y. C.	3 miles	To N. Y. C.	20 miles
To Boston	200 "	To Riverhead	75 "
To Tonawanda	405 "	To L. I. City	70 "
To Albany	210 "	To Sag Harbor	90 "
To Pt. Jefferson	105 "		
To Far Rockaway	45 "	In 10 days	1223 "

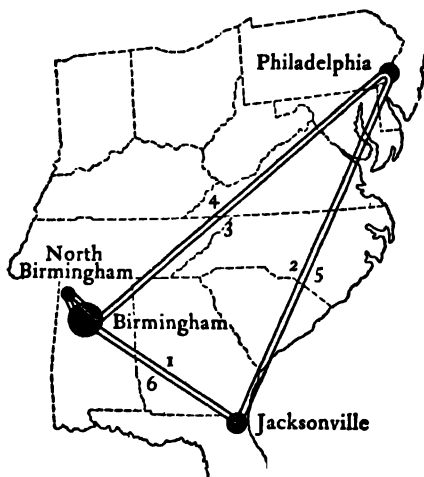
FIG. 9 (a)

wished to build up their accounts without regard to location.

The outcome of this last-mentioned practice was the routing of checks through devious and long channels before they were finally presented for payment. The diagrams in Figure 9 are illustrative of two actual instances occurring prior to the establishment of the Federal Reserve System. Doubtless such cases were extreme, but the fact that they could occur even infrequently is indicative of the weakness of the collection system then in use.¹¹

Few attempts at reform. — Although the evils of the collection process were apparent to a goodly number of bankers,

ROUTE OF A CHECK



BEFORE THE FEDERAL RESERVE

Check on No. Birmingham Bank deposited in Birmingham Bank

1. To Jacksonville, Fla.	488 miles	4. To Philadelphia	941 miles
2. To Philadelphia	817 "	5. To Jacksonville	817 "
3. To Birmingham	941 "	6. To Birmingham	488 "
Then to bank in No. Birmingham. Check not paid and returned to Birmingham Bank		Then by Birmingham Bank to depositor	
4 "		In 14 days	
		4500 "	

Under the Federal Reserve Collection by mail directly in 2 days

FIG. 9 (b)

Courtesy of the Federal Reserve Bank of Philadelphia

¹¹ For still other defects, see Spahr, *op. cit.*, Chapter IV.

only a few sporadic efforts at reform were instigated prior to the establishment of the Federal Reserve System. That nothing very significant in the way of a remedy was accomplished was probably a result of the inability to obtain concerted and centralized action on any plan of nationwide extent. While the loss of interest on checks in the process of collection was often large, it did not appear to be so great as the loss that would have been suffered from the payment of exchange charges had the checks been sent directly to the drawee banks for payment. There were several reasons why this was so. In the first place, the loss of interest resulting from the roundabout collection of checks was more or less offset by the fact that checks drawn by a bank's own customers and sent out of town were correspondingly delayed in their return to the bank for payment. In the second place, many of the banks were allowed to count balances with at least some of their correspondents as part of their required legal reserves which had to be maintained in any event. Checks sent to such correspondents for collection could be conveniently used as a means of maintaining these required reserve balances. Finally, the banks of some cities, such as New York, offset the loss of interest by exacting a charge of the type already described from the depositors of out-of-town checks.

From the foregoing discussion it would seem clear that the only feasible remedy for the evils of our earlier collection system lay in the elimination of those exchange charges levied by the drawee banks. So long as such charges persisted, it was not to be expected that the banks of the system would cease to follow the cumbersome and unsatisfactory method of collection through correspondents. As a matter of fact, the introduction and perfection of a more scientific collection process was forced to await the development of a centrally controlled system under the authority of the Federal Reserve Act.

RESERVES UNDER THE NATIONAL BANKING SYSTEM

Scattered reserves.—One of the chief objections to the reserve arrangements under the national banking system usually cited was that the reserves of the banks were scat-

tered throughout the country in the vaults of thousands of individual banks instead of being centralized. This objection is valid only in part.' It will be recalled that the law required central reserve city banks and reserve city banks to maintain reserves equal to 25 per cent of their deposits, while a 15 per cent reserve was required of all other (country) banks. But the country institutions were permitted to keep three-fifths of their required reserves on deposit with approved national banks in reserve or central reserve cities, and the banks in reserve cities were allowed to deposit one-half of their legal reserve with approved central reserve city banks.

Under these regulations reserves were bound to be fairly widely scattered. Each national bank had to keep some portion of its required reserve in its own vaults, and the banks in central reserve cities maintained their entire legal reserves in cash. Furthermore, so far as the law was concerned, there was no reason why the redeposited portions of the country and reserve city banks' reserves should not themselves be widely scattered throughout the country. At the time of the passage of the Federal Reserve Act there were 49 reserve cities, the national banks of which might hold the deposited reserves of the country banks, and three central reserve cities whose banks might hold the deposited reserves of national banks located anywhere else in the country.

Another influence which, combined with the provisions of the law, made for scattered reserves was the methods employed in collecting checks as described in the preceding section. In the process of collecting checks through correspondent banks, "each bank acquired a coterie of correspondents, the number varying with the size and importance of the bank, from two or three which might suffice for the small country bank to several thousand in the case of a large metropolitan institution."¹² Although not all of these balances which were kept with correspondents could be counted as legal reserve under the law, they were nevertheless part of the banks' working reserves and as such must be taken into account.

¹² Watkins, L. L., *Bankers' Balances*, p. 103.

Concentration of reserves in New York City.—Despite the forces tending toward scattered reserves, there was a very considerable concentration of reserve deposits in New York City. Just prior to the passage of the Federal Reserve Act, on the call of February 4, 1913, the national banks of New York City held balances of other national banks amounting to \$374,000,000, as compared with a figure of \$811,000,000 for all the other national banks of the country. In addition, the New York national banks held \$322,000,000 of state bank and trust company balances as compared with \$805,000,000 of such deposits held by all other national banks. In other words, the national banks of New York City held three-tenths of the total of bankers' balances held by all the national banks of the country. Not only were bank deposits concentrated in New York but there was also a concentration within the city, eight banks holding over two-thirds of all the bankers' balances maintained with national banks of that city in October 1913.¹³ Furthermore, in November 1912, these eight banks had out-of-town (bankers') accounts numbering 15,064 out of a total of approximately 25,000 banks in the United States.¹⁴

The explanation of this concentration of reserves is not difficult. New York City was the financial center of the country and, as such, attracted deposits from banks all over the United States. New York had attained this position even before the establishment of the national banking system and had consequently been designated as the sole central reserve city in the original National Bank Act. This designation increased the financial importance of the city since deposits of other national banks with banks in New York could be counted as part of the required reserves of the former institutions. Another factor which added to the amount of bankers' balances held by the New York banks was the practice of paying interest on such balances by certain banks in the city. The banks of other centers also offered this inducement, paying a higher rate of interest at times than did the New York institutions, but New York had advantages as a financial center which the other cities lacked. As

¹³ The foregoing data are to be found in various tables in Watkins, *op. cit.*

¹⁴ *Ibid.*, Table 4, p. 21.

a result its bankers' deposits assumed the position of outstanding importance already described.

Whatever complex of causes, legal and natural, were responsible for New York's financial supremacy, once this position had been attained, the desirability to the interior banks of maintaining balances in New York was unquestioned. So long as all other banks did the same, a New York draft formed an acceptable means of payment of practically any type of banking obligation outside of the home city, such as remitting payment of checks, repaying funds borrowed from an outside institution, etc. This was true because the bank receiving payment in this form, itself having an account in New York, could send the draft to its New York correspondent for collection and credit to its account.

To the extent that outside payments were made by means of drafts on New York, that city became a sort of clearing center for the banks of the entire country. That it acted in this capacity to a significant degree is shown by the fact that "from information provided by 3329 of the 3428 national banks, it was found that in 1890 all but three drew drafts upon New York, and that the total amount of such drafts was 61.31 per cent of all the drafts drawn upon all the banks of the country."¹⁵ Whether for making individual or banking payments, it is clear that New York drafts were an acceptable means of payment throughout the entire country.

Prior to the establishment of the Federal Reserve System, then, the reserves of the banks were partly scattered and partly concentrated in New York City. But in no system of many thousands of individual banks can the reserves be entirely concentrated in one place. Some reserve is necessary at each bank or office and only a portion may be concentrated in any one locality. It therefore becomes pertinent to inquire the reasons for the almost universal condemnation of our earlier reserve organization by students of the subject.

Defects of the old system.—The chief defects which have received attention in this connection are five in num-

¹⁵ Sprague, O. M. W., *History of Crises Under the National Banking System*, p. 126.

ber. First, the New York banks which held the bulk of the balances of the interior banks were not satisfactory reserve depositories. Second, the working reserves of the banks as a whole were undesirably large. Third, apparent reserves were fictitious to a significant extent. Fourth, the legal reserve requirements of the National Bank Act were too rigid. Fifth, there was no centralized control of reserves. We shall consider each of these objections briefly in the order given.

New York banks unsatisfactory reserve depositories.—While the idea of maintaining reserve balances in the financial center of the country was itself unobjectionable, the New York banks which held these deposits were not satisfactory reserve agents. The reason for this is to be found largely in the failure of these institutions to keep reserves of cash large enough to meet the demands of their bank depositors in times of strain. The failure to keep adequate reserves was, in turn, a direct result of the pernicious practice of paying interest on bankers' balances. The New York banks were avowedly profit-making institutions, but in order to pay interest on these balances and still show a profit it was necessary for them to keep their idle cash reserves at the lowest point compatible with the law.

The New York banks recognized, however, that they might be called upon to pay considerable proportions of these balances from time to time, and hence they tried to invest them in such fashion that they might be recalled at will. The system of daily settlements at the New York Stock Exchange made the "call loan" to stockbrokers appear to fit the need. In ordinary times, if a banker called some of his loans to brokers, the latter would merely transfer the called loans to some other bank. This procedure worked well enough as long as there was some other bank (or banks) willing and able to take over these called loans. In periods of emergency, however, when, because of heavy demands from the interior banks, all of the New York institutions attempted to call their loans at the same time, the situation became disastrous. Having nowhere to turn for loans the brokers could only forfeit their collateral or sell it on the market for what it would bring. In such circum-

stances the market naturally broke badly, preventing further sales of stock except at heavy losses.

Thus, in times of stress, the New York banks found their liquid call loans solidly frozen. The calling of a relatively few loans sent call money soaring upward and intensified the disturbance. As a result comparatively few loans were called and the banks were forced to rely upon their too meager cash reserves to meet demands for currency from the interior.

In spite of their inadequate reserves, the New York banks might have met the various emergencies that they were compelled to face without suspending payments to their bank depositors if they had acted completely in unison. The experience of 1873 seems to indicate that the practice of equalizing reserves, together with the issuance of clearing house loan certificates for the payment of clearing balances, would have prevented suspension in the later crises. Equalization of reserves was not resorted to, however, after 1873, and the use of the loan certificates without equalization did not prevent suspension from taking place.¹⁰ When the New York banks suspended, interior banks perforce followed suit and the whole credit system of the country was temporarily deranged.

Unduly large working reserves.—Turning our attention from the New York banks to the banking system as a whole, it is to be noted that the working reserves (cash plus balances) of the banks as a group were much larger than would have been necessary under an efficient system. This was very largely the result of the roundabout methods of check collection described in the preceding section. If checks were to be collected through correspondents, it was necessary to maintain a number of balances with various banks to effect collection in this manner. Under a more efficient system of collection through a central agency, one account might have taken the place of several or many maintained under the existing system. Many of the accounts were also larger than necessary because of the requirement of compensating balances by collecting correspondent banks.

Fictitious reserves.—Nevertheless, real reserves were not

¹⁰ *Ibid.*, especially pp. 182-183.

so large as they appeared, which was in itself a source of danger. Banks were permitted to count checks in the mail as part of their balances with correspondents, even though the checks had not as yet reached the latter, to say nothing of being finally collected. This float, estimated at from \$300,000,000 to \$500,000,000 in 1907,¹⁷ could by no stretch of the imagination be actually used to meet claims of depositors.

Even if uncollected items had not been counted, the reserves would have been in part fictitious as a result of the legal permission to redeposit a part of them in other banks. To illustrate, a country bank with deposits of \$1,000,000 might keep a reserve of only \$60,000 in its own vaults and deposit \$90,000 with a reserve city bank. Against this reserve deposit the reserve city bank would have to maintain a reserve of \$22,500, of which \$11,250 might be redeposited in a central reserve city bank. The latter would have to keep a cash reserve of \$2812.50 against this deposit. Thus the total cash reserve held against the million dollars of country bank deposits would be only \$74,062.50. The re-depositing of reserves is not objectionable if the depository bank keeps a large cash reserve and maintains a highly liquid condition. Under the national banking system, however, the redepositing of reserves in ordinary commercial banks was a distinct source of danger.

Rigid legal reserve requirements.—In addition to the drawbacks already mentioned, the rigidity of the legal reserve requirements was a complicating factor. Under the National Bank Act the banks were not allowed to expand their loans or investments after the reserve ratio had fallen below the specified minimum, such prohibition to remain in force until the required reserve had again been attained.

This requirement had two bad effects. First, it focussed attention too sharply on the necessity of maintaining a specified reserve rather than a reserve that was adequate. It made the banks feel that the maintenance of a reserve of a particular size was more significant than it really was. In the second place, it prevented the banks from taking the proper action in emergencies. In a crisis a bank should

¹⁷ Watkins, L. L., *op. cit.*, p. 68.

extend loans to all solvent customers and should meet all demands for hand-to-hand money from its depositors. The former of these principles could not be followed without breaking the law. This was bound to bring confusion in times of stress. The attitude created by the reserve requirements caused the interior banks to withdraw a larger proportion of their balances from New York than was necessary and prevented the New York banks from handling an emergency situation satisfactorily. The latter institutions did, it is true, expand their loans in time of crisis in abrogation of the law, but not to the extent that they might have done otherwise.

The legal reserve requirements of the National Bank Act were doubtless necessary in a system of many thousand individual banks. Nevertheless, they operated to enhance the other difficulties of the reserve situation. While they served to limit expansion of credit, they did so in an unfortunate manner. Restraint on credit expansion should be introduced early in the state of over-expansion. Then, if over-expansion is not checked and a crisis should occur, the reserves should be capable of being used to the last dollar to meet the emergency. Under the earlier system, the expansion went on unchecked until the reserve limit was reached, when it was brought to a dead stop with disastrous consequences.

Lack of centralized control.—Finally, the lack of any centralized control was an undoubted drawback. Even a minimum of unified action, such as the complete co-operation of the New York banks, would have prevented the occurrence of some of the more drastic situations which materialized from time to time during the period under review. The lack of any co-ordinated action, combined with the other prevailing evils of the system, served to intensify disturbances which might otherwise have had less far-reaching effects.

OTHER DEFECTS

Unsatisfactory foreign exchange arrangements.—In addition to the major defects, already described, the national banking system developed certain less significant failings. The National Bank Act did not permit banks organized under it to accept drafts drawn on them by either foreign or

domestic merchants. This effectively prevented the large New York banks from financing American exporters and importers, practically all of our foreign trade being financed through London. New York, therefore, although the financial center of the country, had no opportunity to develop into an international financial center of any importance whatever. Since London carried out this function with great efficiency, however, the lack of an acceptance market in New York cannot be considered as a vital drawback to the country's foreign trade financing. There is little doubt, on the other hand, that the absence of an active acceptance market in this country was in part responsible for the resort to call loans to brokers as a major secondary reserve investment by the New York banks.

Poor working relations with the Treasury.—The National Bank Act did allow the Treasury to deposit certain funds with national banks, and also provided that such institutions, if called on, should act as fiscal agents for the government. Nevertheless, the bulk of the government's receipts were held in the form of cash in the independent treasury and sub-treasuries, which resulted in alternate withdrawals of funds from and accessions to the banks. This, in turn led to alternate periods of tight and easy money which were undesirable. Moreover, the policy of certain Secretaries of the Treasury of depositing government funds with certain banks in time of stress, although well-intended, was not satisfactory, since it gave too much power over the banking and credit situation to a political official. On the whole, a revamping of the relations between the banks and the Treasury was much to be desired.

Conclusion.—The unsatisfactory organization of the national banking system, as depicted in the foregoing pages of this chapter, was almost certain, sooner or later, to lead to efforts at reform; and, in fact, agitation for reform broke out from time to time toward the close of the period prior to the establishment of the Federal Reserve System. Nevertheless, the crisis of 1907 had to be endured before any sustained attempts to remedy the situation put in an appearance. The Aldrich-Vreeland Act of March 30, 1908, which provided for emergency issues of bank notes by groups of

national banks, was avowedly a temporary measure of a palliatory rather than a remedial nature, designed to fill the breach until constructive, fundamental legislation could be enacted. The latter being the end in view, the Aldrich-Vreeland Act created a National Monetary Commission to make a thorough study of banking conditions in this and other countries, and to file a report which could be used as a basis for the proposed legislation.

The National Monetary Commission, after four years of effort, submitted in 1912 a most comprehensive report of over forty volumes, which included treatises on nearly every phase of banking in this and many foreign countries. A reform bill, known as the Aldrich bill, was also submitted and became the forerunner of the Federal Reserve Act. The following chapter will be devoted to a consideration of the latter measure and its effect upon the American banking system.

CHAPTER IX

THE FEDERAL RESERVE SYSTEM

The Aldrich Plan.—The proposed legislation of the National Monetary Commission was submitted to Congress under the title of the Aldrich Bill. It provided for a central bank, known as the National Reserve Association, to be located at Washington, with one branch in each of fifteen districts into which the country was to be divided. Its capital of \$300,000,000 was to be subscribed by national banks and by state banks and trust companies which would meet certain requirements of the national law. The subscribing banks were to form local associations of ten or more banks each and were to elect boards of directors for these local associations. The board of directors of the local associations of each district were, in turn, to elect the board of directors of the district branch with the exception of the branch manager who was to be appointed by the governor of the parent association in Washington. The National Reserve Association itself was to have a board of directors in part elected by the boards of the branches, in part *ex officio*, and in part appointed by the President of the United States. Provision was also made for the selection of an executive committee from this board.

The National Reserve Association was given the power to rediscount paper for the subscribing banks, to hold deposits for these banks without the payment of interest thereon, to hold the deposits of the United States, to fix a rate of discount which must be uniform throughout the country at all branches, to transfer funds from one branch to another, to open foreign accounts and trade in foreign paper, to buy and sell gold coin and bullion, and to invest in United States bonds. Frequent reports of conditions were to be made to the Comptroller of the Currency. The notes of the Reserve Association, against which a 50 per cent reserve was required, might be issued to the extent of \$900,000,000, although both

the reserve requirement and the specified maximum issue might be temporarily suspended upon the payment of a special tax.

Certain changes in national bank legislation were also provided. The national banks were not to be allowed to increase their circulation, and any part of the existing circulation which was retired might not be reissued, the aim being gradually to eliminate all note issues other than those of the National Reserve Association. The powers of the national banks were to be broadened somewhat in other directions to permit the acceptance of prime bills, the extension of loans on real estate, and the transaction of a trust business.

The Aldrich bill never received full discussion in either house of Congress¹ and stood no chance of becoming law after the shift in power to a Democratic régime with the election of Woodrow Wilson in 1912.² The bill was supposed to be a non-partisan measure, but it was bound to be associated with the Republican Party under whose auspices it had come into being. Even had this element played no part, the traditional Democratic opposition to a concentration of financial power would have prevented the passage of a measure providing for a single central bank.

President-elect Wilson, however, was fully aware of the need of reform legislation in the banking sphere and, even before his inauguration, work was begun on a Democratic measure which should retain the desirable features of the Aldrich plan, while eliminating the elements of that plan which either were hostile to Democratic ideals or seemed to be incompatible with sound banking policy. This measure was introduced into Congress under the short title of the Federal Reserve Act shortly after President Wilson came into office. It was debated in Congress for some months, but was finally passed with comparatively little revision and became law on December 23, 1913.

THE FEDERAL RESERVE ACT

Federal Reserve districts.—The Federal Reserve Act avoided the difficulty of a single central bank by providing

¹ Willis, H. P., *The Federal Reserve System*, p. 85.

² The House had become Democratic even before Wilson took over the reins of government.

for a regional system. An organization committee, composed of the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency, was directed to designate not less than eight and not more than twelve cities to be known as Federal Reserve cities, and to divide the United States into a corresponding number of districts, each to contain one Federal Reserve city. In fixing the boundaries of the several districts, the committee was authorized to act "with due regard to the convenience and customary course of business." Each district thus decided upon was to be known as a Federal Reserve district, and in the Federal Reserve city of each district there was to be organized a Federal Reserve bank which was to act as a central bank for its district.

Federal Reserve banks.—Regulations concerning the organization and powers of the Federal Reserve banks were set forth in detail in the Act. The more important of these provisions will be considered here under the headings (1) capital, surplus, and earnings; (2) management; (3) powers and functions; (4) note issues; and (5) relations with the government.

Capital, surplus, and earnings.—Federal Reserve banks were to be chartered as federal corporations for a period of twenty years. Each Reserve bank was required to have an initial minimum capital of \$4,000,000, to be subscribed as far as possible by the member banks. All national banks were required to become members of the system, while state banks and trust companies were permitted to join the system by complying with the reserve and capital requirements of national banks. Each member bank was required to subscribe to stock in the district Reserve bank to the amount of six per cent of its own paid-in capital and surplus, one-half of the amount subscribed to be paid in three installments over a period of six months and the remainder to be subject to call, when and if deemed desirable, by the Federal Reserve Board. Should the subscriptions of member banks in any district fail to provide the necessary capital, the deficiency was to be made up by the sale of stock to the public or, this failing, by the allotment of the necessary number of shares to the United States government. Stockholdings of mem-

ber banks were to be subject to increase or decrease with increases or decreases in the capital and surplus of these banks, but were to be otherwise non-transferable.

The net earnings of the Reserve banks were to be divided among the stockholders, the Reserve banks themselves, and the government. Stockholders were to receive a fixed dividend of 6 per cent per annum which was to be cumulative. Earnings in excess of this figure were to go to the government as a franchise tax, except that 50 per cent of such excess earnings was to be carried to surplus (i.e., retained in the business) until the surplus account should amount to 40 per cent of the bank's paid-in capital, after which all surplus earnings were to go to the government.

Management.—The makers of the Federal Reserve Act were anxious to assure democratic and representative management of the Federal Reserve banks. The Act therefore placed the management of each Reserve bank in the hands of a board of nine directors composed of three groups of three directors to be known as Class A, Class B, and Class C directors. Directors of Class A were to be bankers, Class B directors were to be representative of commerce, agriculture, or industry, while the Class C directors were to represent the public. One of the Class C directors was to be designated chairman of the board of directors and Federal Reserve agent, and another was to be deputy chairman and deputy Federal Reserve agent.

The Class C directors were to be appointed by the Federal Reserve Board. The other six members of the board, comprising the Class A and Class B groups, were to be elected by the member banks in a manner calculated to prevent the concentration of voting power in the hands of the larger banks. All of the member banks of the district were to be divided into three groups, group 1 to contain the banks with large capitalization, group 2 the banks with medium-sized capitalization, and group 3 the banks with small capitalization. The banks of each group were then to elect one Class A and one Class B director. In this fashion the small and medium-sized banks would be represented equally with the more powerful institutions.

The regular term of office of members of the board was

fixed at three years, the term of one director of each class to expire annually. To accomplish this arrangement it was provided that, in the case of the first board, one member of each class should serve for one year, one for two years, and one for three years.

Each Federal Reserve bank was authorized to establish branch offices if necessary, the management of each branch to be vested in a board of seven directors.⁸ Four of the seven branch directors were to be selected by the parent Reserve bank, while the other three were to receive their appointments from the Federal Reserve Board. No specified term of office was designated.

Powers and functions.—The Federal Reserve banks were given the power to receive on deposit, from member banks and from the United States, lawful money, bank notes, and checks and drafts on solvent member banks payable at sight. They might also receive, for exchange purposes only, similar funds from other Federal Reserve banks.

Power was given to discount for member banks notes, drafts, and bills of exchange arising out of actual commercial transactions and having a maturity at the time of discount of not more than 90 days, with the exception of paper drawn or issued for agricultural purposes which might have a maturity of six months. The discount of paper secured by investments or drawn for the purpose of carrying or trading in investment securities, other than obligations of the United States, was prohibited. Paper secured by government obligations, however, might be discounted under the same terms and conditions as those surrounding the discount of commercial paper. Acceptances based on the exportation and importation of goods and having not more than three months to run might also be discounted for member banks.

Every Federal Reserve bank was required to receive on deposit at par, from member banks or other Reserve banks, checks and drafts for clearance and collection. The Federal

⁸ By the amendment of June 21, 1917, this section "was amended so as to authorize the Federal Reserve Board to permit or require any Federal reserve bank to establish branch banks within its district. As so amended it provides that the number of directors of such branches shall at the option of the board be not more than seven nor less than three." The McFadden Act later gave the board authority to require any Federal reserve bank to discontinue any of its branches at any time.

Reserve Board was also authorized, at its discretion, to act as a clearing house for the Federal Reserve banks or to designate some particular Reserve bank so to act, and to require each Reserve bank to exercise the functions of a clearing house for its own member banks.

Although the operations of the Reserve banks were confined largely to business with the member banks, certain dealings in the open market were permitted. Thus, the Reserve banks were given the power to buy and sell in the open market cable transfers, bankers' acceptances, and bills of exchange of the type made eligible for discount. They were also permitted to deal in gold coin or bullion at home or abroad, to make loans thereon, to exchange Federal Reserve notes for gold, and to contract loans of gold coin or bullion, giving suitable security therefor. They were further empowered to buy and sell, at home or abroad, bonds and notes of the United States and certain warrants, bills, notes, and revenue bonds of political subdivisions, the latter to have a maturity of not more than six months. They might open accounts in foreign countries with the permission of the Federal Reserve Board, appoint foreign correspondents, and establish foreign agencies with banking powers if necessary or desirable to do so.

As a corollary of the power to discount paper, the Reserve banks were authorized to fix rates of discount for each class of paper, such rates to be determined with a view to accommodating commerce and business and to be subject to the review and determination of the Federal Reserve Board.

Note issues. — A new type of bank note was provided for, to be known as the Federal Reserve note. Federal Reserve notes were to be issued to the Federal Reserve banks through the Federal Reserve agents and at the discretion of the Federal Reserve Board. A Federal Reserve bank wishing to procure these notes, was to make application to its Federal reserve agent for the amount of notes required, the application to be accompanied by the tender of collateral security equal in amount to the sum of the notes applied for. The collateral security thus tendered was to consist of notes and bills accepted for rediscount and was to be held in the custody of the Federal Reserve agent after delivery of the notes.

The Federal Reserve Board was authorized to call upon any Reserve bank at any time for additional security to protect the notes issued to it.

Federal Reserve notes were made obligations of the United States and were to be redeemable in gold at the Treasury Department in Washington, or in gold or lawful money at any Federal Reserve bank. A Federal Reserve bank redeeming or receiving on deposit the notes of another reserve bank was not allowed to pay out such notes under penalty of a 10 per cent tax, but was directed to return them to the issuing bank for payment.

Each Federal Reserve bank was required to maintain a reserve in gold of not less than 40 per cent of its notes in circulation and a reserve in gold or lawful money of not less than 35 per cent of its deposits. A part of the reserve against notes equal to not less than 5 per cent of the notes in circulation was to be held with the Treasury Department against Federal Reserve notes there presented for redemption. Each Reserve bank was permitted to reduce its liability for outstanding notes by depositing its own notes, gold, gold certificates, or lawful money with its Federal Reserve agent, the gold, gold certificates, or lawful money so deposited to be used by the agent solely for the purpose of exchange for outstanding Federal Reserve notes when the latter should be presented to him by his Reserve bank.

In an inadequate effort gradually to eliminate the national bank note, a provision was included in the Act permitting the issuance by the Reserve banks of bond-secured bank notes called Federal Reserve bank notes. The Reserve banks were required to purchase annually at par and accrued interest from the national banks 2 per cent bonds having the circulation privilege to the amount of \$25,000,000 or such portion thereof as might be offered by the national banks. The bonds so purchased might then be used as security for Federal Reserve bank notes or exchanged for 3 per cent obligations of the United States without the issue privilege. This provision failed utterly to accomplish its purpose and needs no further consideration.

Relations with the government.—Legal sanction was given to certain relations between the Reserve banks and the

Treasury by Section 15 of the Act which provided that "the moneys held in the general fund of the Treasury except the 5 per centum for the redemption of outstanding national-bank notes and the funds provided in this Act for the redemption of Federal Reserve notes may, upon the direction of the Secretary of the Treasury, be deposited in Federal Reserve banks, which banks, when required by the Secretary of the Treasury, shall act as fiscal agents of the United States; and the revenues of the Government or any part thereof may be deposited in such banks, and disbursements may be made by checks drawn against such deposits." It was provided, however, that the Secretary of the Treasury might also use member banks as depositories for government funds.

The Federal Reserve Board.—For the purpose of coordinating the major policies of the Federal Reserve banks and securing a measure of centralization in the regional system, a Federal Reserve Board of seven members was created by the Act. Two of the members, the Secretary of the Treasury and the Comptroller of the Currency, were to hold their positions on the board *ex officio*, while the other five were to be appointed by the President of the United States. Not more than one of the five appointed members was to be chosen from any one Federal Reserve district, and the President was directed to have due regard to a fair representation of the different commercial, industrial, and geographical divisions of the country in selecting the appointive members.

In choosing the first appointive members one was to be appointed for two years, one for four, one for six, one for eight, and one for ten years, and thereafter each appointment was to be for ten years. At least two of the members appointed by the President were to be experienced bankers, and one of the appointive members was to be designated as governor of the Federal Reserve Board and was to be its chief administrative officer. The Secretary of the Treasury, however, was made the chairman of the board.

The Federal Reserve Board was to be located in Washington, and the Secretary of the Treasury was authorized to assign offices in the Treasury Department for the use of the board.

Powers and functions.—The major function of the Federal Reserve Board was designed to be the co-ordination of the operations of the Reserve banks with respect to those phases of banking and credit policy which affect the credit or banking structure as a whole. To enable the board effectively to perform this function, it was given the power :

(a) To review and determine the rates of discount as established from time to time by the Federal Reserve banks ;

(b) To permit or require Federal Reserve banks to rediscount the discounted paper of other Federal Reserve banks at rates of interest or discount to be fixed by the Federal Reserve Board ;

(c) To suspend for a period of thirty days, and to renew such suspensions for periods not exceeding fifteen days, any reserve requirement specified in the Act, upon the payment of a graduated tax upon the deficiency in reserves ;

(d) To have the right to determine or define the character of the paper which was eligible for discount within the meaning of the Act ;

(e) To prescribe rules and regulations governing the open market operations of the Federal Reserve banks ;

(f) To regulate, at its discretion, the issuance of Federal Reserve notes to the Federal Reserve banks.

A second function of the Federal Reserve Board was to supervise the Federal Reserve banks and to insure the soundness of their operations. To the attainment of this end the Act gave the board the power :

(a) To examine the accounts, books, and affairs of each Federal Reserve bank and to require statements and reports of condition. Detailed individual statements of condition of each Reserve bank and a consolidated statement for all of the Reserve banks were to be published weekly ;

(b) To suspend or remove any officer or director of any Federal Reserve bank for due cause ;

(c) To require the writing off of doubtful or worthless assets by the Reserve banks ;

(d) To suspend the operations of any Federal Reserve bank for violation of any of the provisions of the Act, and, if deemed desirable, to liquidate or reorganize such bank ;

(e) To require bonds of Federal Reserve agents, and to make regulations for safeguarding money or property of any kind deposited in the hands of such agents ;

(f) To exercise general supervision over the Federal Reserve banks.

The Federal Reserve Board was thus adequately equipped both to control the credit policy of the system as a whole

and to insure the sound operation of the several Federal Reserve banks.

The Federal Advisory Council.—As another link between the Reserve banks and their members on the one hand and the Federal Reserve Board on the other, the Act created a Federal Advisory Council, to consist of one member from each Federal Reserve district. The members of the council were to be selected annually by the boards of directors of the Federal Reserve banks, each member to receive such compensation, subject to the approval of the Federal Reserve Board, as the board of directors of the Reserve bank selecting him might determine.

The Federal Advisory Council was authorized to meet with the Federal Reserve Board at Washington at least four times a year, and was to have the power (1) to confer with the Federal Reserve Board on general business conditions ; (2) to make representations concerning matters within the jurisdiction of the Federal Reserve Board ; and (3) to obtain information and make recommendations concerning matters of banking and credit policy in the various districts or in the system as a whole.*

LEGISLATIVE AND ADMINISTRATIVE DEVELOPMENT

The organization of the system.—With the passage of the Federal Reserve Act the task of organizing the new system was immediately commenced. The organization committee, after an exhaustive investigation, divided the country into the maximum number of twelve districts with Federal Reserve banks located at Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco. Although certain minor changes in district boundaries have since been made by the Federal Reserve Board, the existing district divisions, as shown on the map (Fig. 10), follow closely the original lines determined by the organization committee. The districts were so laid out that the stock subscriptions of member banks in each district were sufficient to provide the \$4,000,000 minimum capital required by law without neces-

* The Act contained other significant provisions relating to national and member banks which will be considered later in the chapter.

sitating the sale of Federal Reserve bank stock either to the public or to the government.

While the organization committee proper was engaged in districting the country and deciding upon the locations of Federal Reserve cities, a technical organization committee of experts, under the direction of H. Parker Willis, drew up by-laws for the Federal Reserve Board and for each of the Reserve banks, and arranged other preliminary matters with respect to internal organization and policies. In this manner both the board and the Reserve banks were enabled to get under way with a minimum of difficulty. The original members of the Federal Reserve Board took the oath of office on August 10, 1914, and the Federal Reserve banks opened their doors for business on the 16th of the following November.

Governors of the Federal Reserve banks.—The Federal Reserve Act made no specific provision for administrative heads of the Reserve banks, comparable with the presidents of the member banks, and it early became necessary for the Federal Reserve Board to decide whether or not such officials should be designated. After due deliberation and inquiry, the Board authorized the board of directors of each Federal Reserve bank to select a chief administrative official for its bank to be known as governor. This accordingly was done.

One peculiarity of the office of governor was that the Reserve banks did not show a disposition to select members of their own boards of directors for this office. The result was that the governor, in many instances the most important single officer of the bank, was not a member of the board of directors and was not entitled to vote at meetings of the board. In practice, he met with the board of directors, although not a member, and was usually also appointed to the executive committee of the board. The situation was not entirely satisfactory, but seemed to be the most feasible working arrangement possible under the Federal Reserve Act,⁵ prior to 1936.

Conferences of governors and agents.—The governors of the Federal Reserve banks soon organized a conference of governors, and this body met regularly twice a year

⁵ See Willis, H. P., *op. cit.*, pp. 687 ff.

with the Federal Reserve Board at the call of the latter body to discuss banking problems of mutual interest and to make recommendations or suggestions. The Federal Reserve Board also calls an annual conference of Federal Reserve agents for purposes of discussion and mutual exchange of views. These two conferences, together with the meetings of the Federal Advisory Council, enabled the board to maintain close contact and satisfactory working relations with the various important elements in the system.

The open market policy conference. — There was organized in 1922 an open market investment committee consisting of the governors of four of the Reserve banks, a fifth being added later, to co-ordinate and unify the open market sales and purchases of the Federal Reserve banks. By a ruling adopted on March 25, 1930, the Federal Reserve Board abolished the open market investment committee and substituted therefor an open market policy conference to consist of one representative from each Federal Reserve bank. The conference met with the Federal Reserve Board upon the call of the governor of the board or of the chairman of the executive committee of the conference after consultation with the governor of the board. The executive committee referred to consisted of five members selected by and from the members of the conference for a period of one year with full power to act in the execution of the policies adopted by the conference and approved by the Federal Reserve Board.⁶

In practice, the representatives selected by the Reserve banks as members of the conference consisted of the governors of the respective Reserve banks, so that the composition of the open market policy conference was identical with that of the conference of governors, but the two conferences acted in different capacities. The executive committee of the open market policy conference was composed of the governors of the Federal Reserve banks of New York, Boston, Philadelphia, Cleveland, and Chicago, and coincided with the membership of the old open market investment committee.⁷

⁶ See *Operation of the National and Federal Reserve Banking Systems*, Hearings before a subcommittee of the Senate Committee on Banking and Currency, Part 1, p. 158.

⁷ The open market policy conference was legalized by the Banking Act of 1933 (p. 345) and altered greatly by the Banking Act of 1935 (p. 492).

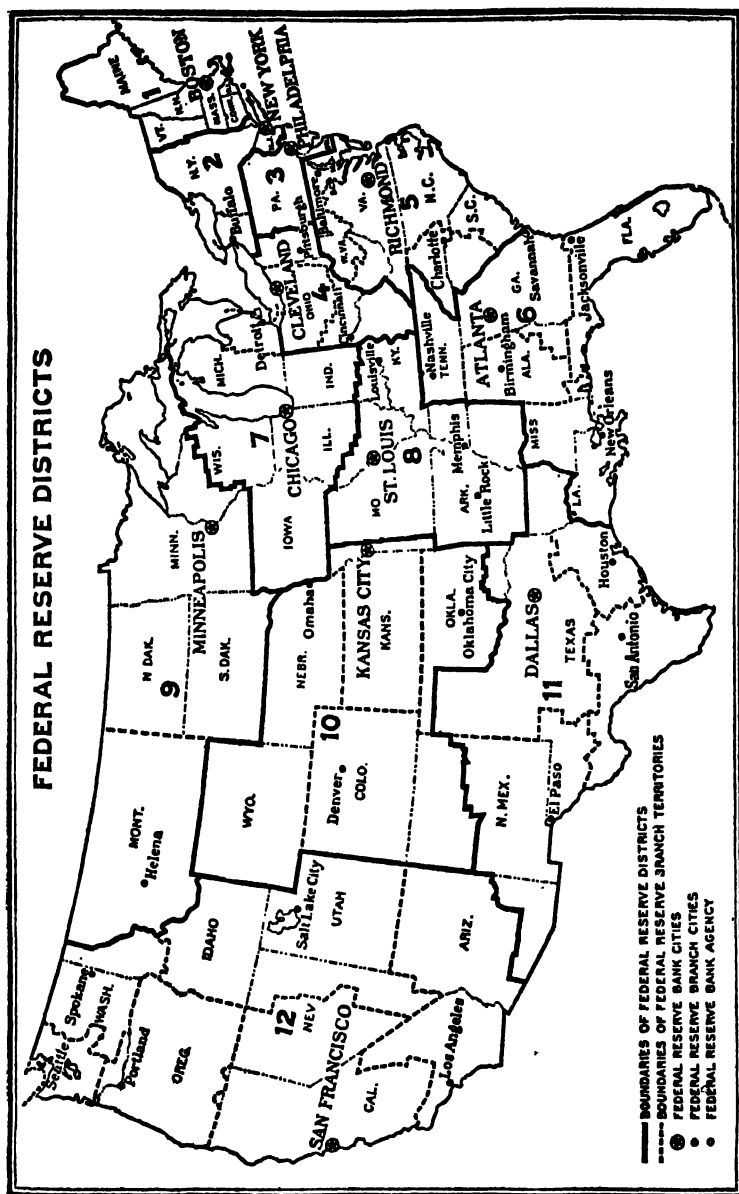


FIG. 10

Source : Annual Report of the Federal Reserve Board 1930

Publicity and research.—Contact between the Federal Reserve Board and the public (including the member banks) is maintained through the publication monthly of the board's official organ, the *Federal Reserve Bulletin*, and the publication annually of its report to the House of Representatives. The board maintains an efficient division of research and statistics which is continuously engaged in the analysis of banking problems and the gathering of important statistical data. As new data or analyses become available, they are published in the *Federal Reserve Bulletin* in addition to condition reports, regulations, and other information included therein.

Pre-war amendments.—The only pre-war amendment to the Federal Reserve Act with which we need be concerned is the Act of September 7, 1916. By this Act the Federal Reserve banks were authorized to receive on deposit from member banks all checks and drafts payable on presentation, and also to receive maturing bills for collection. They were empowered, in addition, to receive such checks, drafts, and bills for purposes of exchange or collection from other Federal Reserve banks. Prior to this the Reserve banks had not been permitted to receive maturing bills for collection nor had they been allowed to receive on deposit or for exchange checks and drafts on non-member banks.

By this same amendment the Federal Reserve banks were authorized to make advances to member banks on the promissory notes of the latter for periods of not more than fifteen days, such notes to be secured by eligible paper or obligations of the United States.

The amendment further permitted Federal Reserve banks to open banking accounts for foreign correspondents with the consent and approval of the Federal Reserve Board.

Wartime amendments.—The Act of June 21, 1917, made a number of changes affecting the Federal Reserve banks. The membership of state banks in the system was encouraged by the provision that such banks joining the system should retain their full charter and statutory rights as state banks and by permitting state bank members to withdraw from the system upon six months' written notice. In addition to this, the Reserve banks were permitted to receive

for clearance or collection from non-member banks checks, drafts, and maturing items, provided that these banks maintained sufficient balances with the Reserve banks to offset the items in transit held for their accounts by the Reserve banks. Finally, in order to assist the concentration of gold in the Federal Reserve banks for war purposes, the issuance of Federal Reserve notes upon the security of gold, as well as commercial paper, was permitted. Any gold so turned over to the Federal Reserve agent as security for Federal Reserve notes might also be counted as part or all of the 40 per cent reserve required to be held against such note issues.

Post-war amendments.—By an Act of March 3, 1919, just following the war, the distribution of Reserve bank earnings was substantially altered. All net earnings in excess of the 6 per cent dividend to member banks were to be carried to surplus until the surplus account should amount to 100 per cent of the Reserve bank's subscribed capital, after which 10 per cent of the excess earnings was to be carried to surplus and the other 90 per cent was to be paid to the government as a franchise tax.

After the crisis of 1920 the agricultural interests of the country suffered from a substantial and prolonged depression. On the basis of the difficulty of the farmers, the farm bloc in Congress was instrumental in obtaining the passage of certain measures amending the Federal Reserve Act in the interests of agriculture. By an Act of June 3, 1922, the number of appointive members on the Federal Reserve Board was increased from five to six, the added member to be representative of the agricultural interests of the country. The earlier provision that two of the appointive members of the Board must be experienced bankers was also removed by this Act.

The Agricultural Credits Act of March 4, 1923, amended the Federal Reserve Act by (a) permitting state banks to become members of the system with a capital of 60 per cent of the minimum before required; (b) permitting the discount and purchase by the Reserve banks of sight bills of exchange drawn to finance the shipment of non-perishable agricultural commodities; (c) permitting the discount by the Reserve banks of agricultural acceptances with a maturity of

six months and the rediscount of agricultural paper with a maturity of nine months, the latter to include the paper of co-operative marketing organizations; and (d) permitting the discount by the Reserve banks of agricultural paper for the Federal intermediate credit banks which were established by the Act, and authorizing the purchase and sale in the open market of the debentures issued by the latter institutions.

The Act of February 25, 1927, contained for the most part provisions affecting the national and state member banks. It did affect the Reserve banks in one important respect, however, by substituting indeterminate charters for the 20-year charters granted to these institutions by the original Federal Reserve Act.

The Glass-Steagall Act was passed as an emergency measure on February 27, 1932. The first two provisions of the act were designed to assist member banks in difficulties. They permitted any Federal Reserve bank (a) to make advances to groups of five or more banks upon their promissory notes, subject to certain regulations and restrictions, *provided that* the borrowing banks possessed no eligible paper, and (b) for the period of one year to make advances to individual member banks with capital of not more than \$5,000,000 on any satisfactory security under certain restrictions and conditions, and in unusual and exigent circumstances. Loans made under the provisions of (a) or (b) above were to be charged for at a rate one per cent above the highest discount rate in effect on eligible paper, and notes so discounted could not be used as security for Federal Reserve note issues.

In order to permit the issuance of Federal Reserve notes, while still not making it necessary for member banks to increase their discounts at the Reserve banks, the Glass-Steagall Act, in Section 3, authorized the Federal Reserve Board, until March 3, 1933, to permit Federal Reserve agents to accept obligations of the United States, as well as eligible paper, as security for Federal Reserve notes, if it were deemed in the public interest to do this. Section 3 of this law was extended four times and expired in June 1941.

NATIONAL AND MEMBER BANK LEGISLATION

Nature of the legislation.—The preceding sections of the chapter have been concerned chiefly with that phase of federal banking legislation which related to the central banking structure itself. Attention must now be directed to those provisions of the Federal Reserve Act and subsequent enactments pertaining to national or member banks. Aside from the alteration in reserve requirements, which was the natural result of the establishment of a central banking system, the general purport of these provisions has been to equalize competitive conditions between the banks of the national and state systems.

Changes in reserve requirements.—With the establishment of a group of regional central banks with the power to receive deposits from and make advances to member banks, it was natural to expect some relaxation of the rigid and fairly high reserve requirements of the National Bank Act. The original Federal Reserve Act accordingly introduced a new set of reserve requirements for national and member state banks. The former classification of central reserve city, reserve city, and all other banks was retained, but the required legal reserve for banks in these three groups was reduced from 25, 25, and 15 per cent of all individual deposits to 18, 15, and 12 per cent of demand deposits. A distinction in the reserve to be held against demand and time deposits thus was recognized, a 5 per cent minimum reserve being required against time deposits in all three classes of banks.

The legal reserves thus specified were to be held partly in the member banks' own vaults and partly in the form of deposits with the Federal Reserve banks. The proportions in which the reserves were to be distributed between the member banks and the Federal Reserve banks are shown in Table V. A period of three years was allowed for the transfer of reserves from other depository banks to the Federal Reserve banks.

Before the transition period of three years had elapsed, the United States entered the Great War, and the reserve requirements of member banks were shortly altered once more to provide for the concentration of gold in the vaults of the Federal

TABLE V

MEMBER BANK RESERVES UNDER THE ORIGINAL FEDERAL RESERVE ACT

Banks located in	Against demand deposits				Against time deposits per cent
	Total per cent	Proportion required to be held in			
		(1) Own vaults	(2) Fed. Res. Bk.	(3) Either (1) or (2)	
Central reserve cities.....	18	6/18	7/18	5/18	5
Reserve cities..	15	5/15	6/15	4/15	5
All other.....	12	4/12	5/12	3/12	5

Reserve banks. By the Act of June 21, 1917, the required reserves against both demand and time deposits were again reduced and the total legal reserves were required to be kept in the form of deposits with the Federal Reserve banks. Table VI shows the minimum reserve required after the amendment.

TABLE VI

MEMBER BANK RESERVES UNDER THE FEDERAL RESERVE ACT AS AMENDED

<i>Class of Bank</i>	<i>Per cent of deposits required to be held</i>	
	<i>Against demand deposits</i>	<i>Against time deposits</i>
Central reserve city.	13	3
Reserve city.. . . .	10	3
All other.....	7	3

Although the change just noted was a war measure, no further alteration was made in member bank reserve requirements until after the great depression. Such cash in vault as the member banks have found necessary to the conduct of their business must be kept in addition to the legal reserves in the Federal Reserve banks.

Broadening the powers of national banks.— Certain sections of the original Federal Reserve Act so amended the National Bank Act as to increase materially the powers of the national banks. The state banks in the larger cities had begun to encroach on the commercial banking business of the national institutions, while the latter, because of legal restrictions, were unable to retaliate by entering the savings and

trust fields. The country national banks were also at a disadvantage because of the ability of the state banks to grant real estate loans. Through the increased powers granted them by the Federal Reserve Act and later federal legislation, however, the national banks were enabled to expand their business along noncommercial banking lines.

Fiduciary powers.—Section 11 of the Federal Reserve Act gave the Federal Reserve Board the power to grant by special permit to national banks applying therefor the right to act as trustee, or in any other fiduciary capacity in which state banks or trust companies are permitted to act. National banks acting in this capacity were required to segregate all fiduciary assets from the general assets of the bank and to maintain a separate set of books and records for all fiduciary transactions.

Time deposits and real estate loans.—Two provisions of the Federal Reserve Act enabled the national banks to compete to some extent with the state banks for a savings bank business. In the first place, a distinction was made between demand and time deposits and the minimum reserve required to be held against the latter was much smaller than the reserve against demand deposits, as already noted in the preceding section. Secondly, national banks were granted the power to make loans secured by real estate, a profitable type of savings bank business.

The original Federal Reserve Act permitted national banks not located in central reserve cities to make loans on unencumbered and improved farm land for periods of not more than five years. Such loans could be made in amount not to exceed 25 per cent of the lending bank's capital and surplus or one-third of its time deposits, and were not to exceed 50 per cent of the appraised value of the real estate offered as security. The amendment of September 7, 1916, permitted the inclusion of loans secured by improved urban real estate, up to 50 per cent of the value of the property, with a maturity of not more than one year. Finally, the McFadden Act of February 25, 1927, changed the limit on total real estate loans to 25 per cent of the lending bank's capital and surplus or one-half of its savings deposits, and permitted urban real estate loans with a maturity up to five years. Banks in central reserve cities were also permitted to grant real estate

loans under this amendment.

Acceptances.—Under the original Act, member banks (including all national banks) were permitted to accept drafts or bills of exchange growing out of transactions involving the exportation or importation of goods in an amount not greater than 50 per cent of their capital and surplus. Under the Act of September 7, 1916, this power was broadened to permit the acceptance of drafts or bills of exchange :⁸

(a) Which grow out of transactions involving the importation or exportation of goods,

(b) Which grow out of transactions involving the domestic shipment of goods, provided shipping documents conveying or securing title are attached at the time of acceptance,

(c) Which are secured at the time of acceptance by warehouse receipts or other such documents conveying or securing title covering readily marketable staples,

(d) Drawn (under regulations to be prescribed by the Federal Reserve Board) by banks or bankers in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as required by the usages of trade in the respective countries, dependencies, or insular possessions.

The authority granted to the Federal Reserve Board, under the amendment of March 3, 1915, to permit national banks to accept bills and drafts up to 100 per cent of their capital and surplus (not more than half of which could be based on domestic transactions) was inadvertently omitted in the Act of September 7, 1916, but was again restored by the Act of June 21, 1917.

Foreign and domestic branches.—The Federal Reserve Act, as amended, permitted any national bank with a capital and surplus of \$1,000,000 or more to apply to the Federal Reserve Board for the authority to establish foreign branches or to invest not more than 10 per cent of its capital and surplus in the stock of companies principally engaged in a foreign banking business.

The McFadden Act (February 25, 1927) for the first time authorized the establishment, subject to various restrictions, of *de novo* home city branches by national banks. The same act limited somewhat the power of member state banks in certain states to establish new branch offices. These provisions relat-

⁸ *Digest of Rulings*, Federal Reserve Board 1928, p. 581.

ing to domestic branch banking are of considerable interest and importance and will be discussed in some detail in a later chapter.

Emergency and reform legislation.— Important emergency and reform legislation was passed in 1933 and 1935 which contained provisions affecting member banks in sundry ways. It seems advisable, however, to confine the discussion in the present chapter to the period preceding the banking crisis. The crisis itself and the legislation which followed will be discussed in the following chapter.

THE BANKING SYSTEM IN 1930

Growth of the Federal Reserve system.— The development of the Federal Reserve system up to the time of the depression is shown by Table VII which gives the loans and investments and the deposits of member banks and of all banks in the United States in June of each year from 1914 to 1930.

The percentages in the third and sixth columns of the table are significant. They show that, relatively to the totals for all banks, member bank loans and investments and member bank deposits increased fairly regularly and rapidly up to 1919, but that after that year they formed a nearly constant percentage of the totals for all banks in the country.

Meanwhile, the combined resources of the twelve Federal Reserve banks increased from \$381,456,000 on June 25, 1915, to \$5,202,597,000 at the close of the year 1930; and the Reserve banks greatly extended their operations and sphere of influence in the interval. It is not desirable to consider the various phases of development of the Federal Reserve system at this point. A picture of the volume of operations of the Reserve banks since 1927, however, is presented in Table VIII from the report of the Federal Reserve Board for 1930.

Individual banks.— Among the individual banks of the system the most marked tendencies were in the direction of further departmentalization within individual institutions and a persistent concentration of banking resources through amalgamations and consolidations. The continued development of the "department-store" type of banking institution

was stimulated by the federal legislation previously noted which made it possible for national banks to perform other than commercial banking functions.

TABLE VII

LOANS AND INVESTMENTS AND DEPOSITS OF MEMBER BANKS
AND ALL BANKS IN THE UNITED STATES
(In millions of dollars)

<i>Date: June</i>	<i>Loans and investments</i>			<i>Deposits</i>		
	<i>Members (1)</i>	<i>All banks (2)</i>	<i>Per cent of (1) to (2)</i>	<i>Members (1)</i>	<i>All banks (2)</i>	<i>Per cent of (1) to (2)</i>
1914	8,313	20,789	40	6,374	18,566	34
1915	8,764	21,466	41	6,678	19,131	35
1916	10,315	24,587	42	8,395	22,759	37
1917	12,453	28,287	44	10,301	26,352	39
1918	18,507	31,813	58	15,670	28,765	54
1919	22,242	36,570	61	19,171	33,603	57
1920	25,559	41,685	61	21,915	37,721	58
1921	24,121	39,999	60	20,637	35,742	58
1922	24,182	39,956	61	22,397	37,615	60
1923	26,507	43,738	61	23,871	40,688	59
1924	27,167	45,180	60	25,711	43,405	59
1925	29,518	48,830	60	28,440	47,612	60
1926	31,184	51,562	60	29,781	49,733	60
1927	32,756	53,750	61	31,269	51,662	61
1928	35,061	57,265	61	32,133	53,398	60
1929	35,711	58,474	61	32,284	53,852	60
1930	35,656	58,108	61	33,690	54,954	61

Source : Annual Report of the Federal Reserve Board 1930 ; pp. 89-90.

The consolidation movement, which was perhaps the most important development in the period since the establishment of the Federal Reserve system, came about in response to a similar movement in business. The number of banks in the United States and possessions was reduced from 27,062 in June 1915 to 24,079 in June 1930, while total resources increased from 27.8 billion to 74.0 billion dollars in the same interval. Actually the movement had gone farther than the figures indicate because of a fairly wide growth of chain and group banking in the period in question. The whole question is one of outstanding importance and will be treated in detail at a later point.

During the decade 1921-1930, there also occurred an unprecedented series of bank failures. This phenomenon, in a

TABLE VIII

VOLUME OF OPERATIONS IN PRINCIPAL DEPARTMENTS

	1927	1928	1929	1930
<i>Number of Pieces Handled</i>				
Bills discounted:				
Applications	97,000	123,000	145,000	99,000
Notes discounted . . .	371,000	443,000	526,000	415,000
Bills purchased in open market for own account	254,000	251,000	196,000	208,000
Currency received and counted . .	2,194,608,000	2,270,555,000	2,427,330,000	2,441,989,000
Coin received and counted	2,691,184,000	2,929,091,000	3,239,709,000	3,325,555,000
Checks handled	862,275,000	887,997,000	924,449,000	904,975,000
Collection items handled:				
United States Government coupons paid	37,045,000	28,765,000	20,935,000	19,362,000
All other	5,909,000	6,461,000	6,504,000	6,388,000
United States securities — issues, redemptions, and exchanges by fiscal agency department.	7,201,000	6,682,000	1,833,000	1,417,000
Transfers of funds	1,830,000	2,011,000	2,139,000	1,868,000
<i>Amounts Handled</i>				
Bills discounted . . .	\$31,934,607,000	\$62,412,061,000	\$60,747,124,000	\$14,067,117,000
Bills purchased in open market for own account	4,050,867,000	4,240,669,000	3,587,478,000	3,873,698,000
Currency received and counted	12,939,578,000	13,315,551,000	14,782,429,000	14,262,809,000
Coin received and counted	7,432,131,000	7,451,125,000	7,478,219,000	537,534,000
Checks handled	278,309,627,000	301,703,814,000	367,215,123,000	324,883,021,000
Collection items handled:				
United States Government coupons paid.	553,703,000	543,373,000	535,612,000	499,111,000
All other	6,710,317,000	7,414,440,000	7,185,384,000	7,528,014,000
United States securities — issues, redemptions, and exchanges by fiscal agency department	10,803,043,000	9,002,383,000	7,018,844,000	7,245,189,000
Transfers of funds . .	136,381,899,000	148,749,027,000	170,789,669,000	198,880,880,000

Revised.

generally prosperous period of American life, was so extraordinary that it will be considered in detail, along with the consolidation and branch banking movements, in a later chapter.

Conclusion.—In this chapter the legislative framework of the Federal Reserve system has been described and its administrative development up to 1933 has been outlined. In the following chapter we shall consider subsequent important legislation affecting the member banks, the Federal Reserve banks and the Federal Reserve Board.

REFERENCES

- Burgess, W. R. *The Reserve Banks and the Money Market*. New York (Revised Edition). 1936.
- Goldenweiser, E. A. *The Federal Reserve System in Operation*. New York. 1925.
- Harding, W. P. G. *The Formative Period of the Federal Reserve System*. Boston. 1925.
- Kemmerer, E. W. *The A B C of the Federal Reserve System*. Princeton (Eighth Edition). 1929.
- Warburg, P. M. *The Federal Reserve System*, Vols. I, II. New York. 1930.
- Willis, H. P. *The Federal Reserve System*. New York. 1923.
- Willis, H. P. and Steiner, W. H. *Federal Reserve Banking Practice*. New York. 1926.
- Letters to College Classes in Economics and Banking Discussing the Practical Operations of the Federal Reserve System*. (Federal Reserve Bank of Richmond.)
- Annual Reports of the Board of Governors of the Federal Reserve System*. *Digest of Rulings of the Federal Reserve Board*. Washington. (Federal Reserve Board.) 1928.
- Federal Reserve Bulletin*.

CHAPTER X

THE BANKING CRISIS AND REFORM LEGISLATION

Introduction.—In preceding chapters the development of the banking system of the United States up to the time of the great depression has been traced in some detail. Even prior to the depression, in the 1920s, a large number of bank failures had caused a good deal of concern.¹ The number of failures increased sharply during the depression and led eventually to a severe banking crisis. Aside from an emergency banking act, discussed below, the banking crisis was probably fundamental in bringing about the passage of reform legislation in 1933 and 1935. Before considering the rather far-reaching reforms of these two acts, it will be advisable to trace briefly the course of the crisis and to outline the provisions of the Emergency Banking Act of 1933.

THE BANKING CRISIS

Difficulties preceding the crisis.—The banking difficulties which were enhanced by the depression were greatly increased by the departure of England from the gold standard in September 1931. The United States lost some \$700,000,000 in gold in the ensuing six weeks and, domestically, a sharp increase in the withdrawal of deposits and hoarding of currency by the public put a heavy added strain on an already weakened banking position. In October 1931, there was recorded the largest number of bank failures for any single month in the history of the country. The situation was becoming desperate and pointed to the necessity for emergency action.

The National Credit Corporation.—The first emergency measure was the organization of the National Credit

¹ The subject of bank failures in the nineteen-twenties and during the depression is considered in some detail in Chapter XXXII.

Corporation in October 1931. The Corporation was established by the banks at the suggestion of President Hoover as an instrument of self-help in the emergency. The Corporation was organized with a nominal capital of 12 shares of \$100 par value, one share to be subscribed by each of 12 directors, one from each Federal Reserve district. The Corporation was authorized to issue debentures up to \$1,000,000,000, the banks of the country being requested to subscribe to such debentures at par in the amount of two per cent of their net demand and time deposits. The funds obtained by the sale of debentures by the Corporation were to be used in making loans to banks in difficulties. The banks were to form groups or associations in each Federal Reserve district, each group to establish a loan committee. A bank in need of funds was to apply for a loan to its group committee, which would pass on the collateral and, if it approved the loan, recommend its extension to the Corporation. The banks of a group were to be jointly liable for money borrowed by a member, and the amount borrowed, in general, was restricted to the total debenture subscriptions of the banks in the group.²

Whatever merit the National Credit Corporation plan might be expected to possess lay in the favorable psychological influence it might exert. The red tape involved in obtaining a loan, the limitation of loans to the debenture subscriptions of the applying group, and the requirement that all of the members of a group be jointly liable for loans extended, were sufficient to prevent the Corporation from furnishing essential assistance to distressed banks. The amount of accommodation actually extended by the Corporation was some \$135,000,000, a negligible quantity in the circumstances.³ It seems probable, however, that the sharp decrease in bank failures in November, 1931, may be attributed, in part at least, to the favorable reception accorded to the Corporation at the outset. The resumption of a heavy mortality rate in December, on the other hand, indicates that the success of the Corporation was short lived.

² For further details, see *Federal Reserve Bulletin*, October 1931, pp. 555-557.

³ See Bogen and Nadler, *The Banking Crisis*, p. 102.

The Reconstruction Finance Corporation.—The failure of the National Credit Corporation to stem the tide of bank failures made some more effective action essential. Such action was taken early in 1932 with the passage of the Reconstruction Finance Corporation Act on January 22nd. This act provided for the organization of a corporation, to be known as the Reconstruction Finance Corporation (hereafter termed the R.F.C.), with a capital of \$500,000,000 to be subscribed by the United States Treasury. The R.F.C. was also authorized to issue debentures to the amount of three times its capital, thus giving it total possible funds of \$2,000,000,000 with which to work. The debentures of the R.F.C. might be purchased by the Treasury (and actually were so purchased) or sold to the public.

With regard to the scope of its functions, by Sec. 5 of the Act, the R.F.C. was "Authorized and empowered to make loans, upon such terms and conditions not inconsistent with this act as it may determine, to any bank, savings bank, trust company, building and loan association, insurance company, mortgage loan company, credit union, Federal land bank, joint stock land bank, Federal intermediate credit bank, agricultural credit corporation, livestock credit corporation, organized under the laws of any State or of the United States, including loans secured by the assets of any bank that is closed, or in process of liquidation to aid in the reorganization or liquidation of such banks. . . *Provided*, That not more than \$200,000,000 shall be used for the relief of banks that are closed or in the process of liquidation." Loans were permitted to run for three years, extended to five if necessary, and were to be secured adequately by collateral offered by the borrowing institution. Provision was also made for direct loans to farmers and loans to railroads, with which we are not here concerned. No loans might be made to new enterprises or for new projects. The R.F.C. was granted a corporate existence of ten years.

The R.F.C. began operations on February 2, 1932, with almost immediately visible results. The number of bank failures decreased in March, 1932, to the lowest figure since October 1929. Some increase occurred in the two months

TABLE IX

REPORT OF THE RECONSTRUCTION FINANCE CORPORATION
AGGREGATE LOANS TO EACH CLASS OF BORROWER, FEBRUARY 2 TO DECEMBER 31, 1932, INCLUSIVE

Class	Authorized ¹ Feb. 2 to Dec. 31	Advanced Feb. 2 to Dec. 31	Repaid Feb. 2 to Dec. 31	Outstanding Dec. 31, 1932
Under sec. 5 of the Reconstruction Finance Corporation act:				
Banks and trust companies	\$949,858,000.00	\$850,882,060.02	\$256,284,353.11	\$594,597,706.91
Building and loan associations	907,780,044.75	93,033,114.07	9,083,776.91	84,240,337.76
Insurance companies	83,046,031.06	88,037,018.92	5,588,738.52	5,588,738.40
Mortgage loan companies	93,761,992.61	86,332,020.30	11,990,207.36	77,041,813.03
Credit unions	472,446.00	440,098.00	8,338.00	431,200.00
Federal land banks	20,000,000.00	18,500,000.00	.....	18,500,000.00
Joint-stock land banks	6,207,000.00	2,577,845.63	62,544.32	2,465,301.30
Agricultural credit corporations	3,619,850.98	3,456,027.33	1,082,310.40	2,374,316.93
Regional agricultural credit corporations	7,285,072.50	5,372,062.60	655.03	5,371,407.57
Livestock credit corporations	13,145,602.85	11,810,403.61	4,066,791.16	7,743,612.45
Railroads (including receivers)	337,435,093.00	284,311,271.48	11,839,562.71	272,471,708.77
Total, sec. 5 of the Reconstruction Finance Corporation act.	1,623,704,844.44	1,427,603,122.61	299,007,777.52	1,127,695,345.12
Under the emergency relief and construction act of 1932:				
Self-liquidating projects under sec. 201 (a), Title II	\$1,465,572,534.24	15,737,000.00	.....	15,737,000.00
Financing of agricultural commodities and livestock, sec. 201 (d), Title II	54,775,020.67	1,439,074.09	115,456.95	1,324,517.14
Amounts made available for relief and work relief under sec. 1, Title I	112,614,673.22	70,067,042.09	.....	70,067,042.09
Total emergency relief and construction act of 1932	313,061,128.13	97,144,016.18	115,456.95	97,028,559.23
Grand total	\$1,937,667,972.57	1,524,747,138.82	300,023,234.47	1,224,723,904.35

¹ The corporation laid out-standing on Dec. 31, 1932, agreements to make loans (not included in the above figures) upon the performance of specified conditions, as follows: Banks and trust companies, \$80,896.20.

² Loans to banks and trust companies include loans to aid in reorganization or liquidation of closed banks as follows: \$56,113,587.05 during the period from February 2 to December 31, 1932, inclusive.

³ Includes authorization of two loans, aggregating \$241,404.37, temporarily suspended pending further consideration.

⁴ Includes loans authorized which were subsequently canceled or withdrawn, aggregating \$60,727,054.35, as follows: Banks and trust companies, \$52,095,684.50; building and loan associations, \$3,413,557.31; insurance companies, \$3,122,883.44; mortgage loan companies, \$2,446,104.40; credit unions, \$32,438; Federal land banks, \$5,500,000; joint-stock land banks, \$19,954.68; agricultural credit corporations, \$42,875.80; livestock credit corporations, \$1,178,704.19; railroads (including receivers), \$64,740; self-liquidating projects, \$100,000; and financing of agricultural commodities and livestock \$310,111.94.

Source of data: *Federal Reserve Bulletin*, February 1933, p. 66

following; but both the number and deposits of failed banks remained relatively small until June. In that month, the refusal to grant loans to certain banks in the neighborhood of Chicago brought on a series of failures in that region and again aroused the distrust of bank depositors in certain sections of the country. The number of suspensions continued large in July, but a temporary revival in markets and prices in August brought an increase in confidence which reduced failures to moderate proportions until December, when the number again rose abruptly.

The extent to which the R.F.C. assisted banks and other financial institutions during 1932 is shown in the accompanying table. Although it is possible that a more liberal lending policy on certain occasions might have lessened the number of bank failures, there is no doubt that the situation would have been worse than it was had it not been for the operations of the R.F.C. The aid given by the R.F.C. would have been much more effective, on the other hand, had the publication of the names of institutions soliciting loans and the amounts loaned or applied for not been insisted upon by the Clerk of the House in the summer of 1932.

Other legislation.—Certain other enactments in the nature of emergency legislation were incorporated in the statutes in the course of the year 1932. These need no detailed analysis at this point. The Glass-Steagall Bill, which became law on February 27, 1932, has already been considered, while the Home Loan Bank Act of July 22, 1932, is treated in a later chapter (Chapter XXXVIII). The latter measure contained an inflationary rider permitting national banks, for a three-year period, to issue notes secured by United States bonds bearing not more than $3\frac{3}{8}$ per cent interest, under which a substantial amount of national bank notes were issued in the course of the year without any startling effects. The Emergency Relief and Reconstruction Act of July 21, 1932, broadened the powers and lending functions of the R.F.C., but did not materially change the relation of this corporation to banks and trust companies. One section of this act granted the Federal Reserve Board the power, in exigent and unusual circumstances, to permit

Federal Reserve banks to extend loans directly to business enterprises when the latter were unable to obtain accommodation at their member banks, but loans of only \$859,000 were granted under this provision during the rest of the year.⁴ In short, the one major enactment designed to right the banking situation, so far as bank failures were concerned, was the Reconstruction Finance Corporation Act. That this failed in its main purpose will be shown in the following paragraphs.

The banking crisis of 1933.—The year 1933 opened with 237 bank suspensions in January. Confidence was badly disturbed in different sections of the country, and it had been found necessary for various political authorities to declare local banking moratoria in certain regions to prevent the complete collapse of banking facilities. The seriousness of the situation was not generally recognized, however, until February 14th, when Governor William A. Comstock declared a bank holiday for a week for all of the banks in the State of Michigan, as a result of difficulties in the Detroit area. Nothing short of a tremendous cash loan would have prevented the failure of one of the large Detroit banks with disastrous results. The necessary loan could not be arranged, and Governor Comstock's proclamation followed.

The closing of the Michigan banks not only alarmed frightened depositors in other sections of the country, but set up a drain of cash from other regions into the Michigan area. Large corporations operating in Detroit withdrew deposits in cash from neighboring states and from New York in order to meet payrolls and other needs usually satisfied by the local banks. Banks in neighboring sections in turn withdrew balances from New York in order to obtain cash to meet the demands of their own creditors. Under such circumstances, restriction of payments by banks in other states was inevitable. On February 23rd, Indiana joined Michigan in limiting banking activities to a nominal basis. Maryland followed on the 25th, Arkansas on the 27th, and Ohio on the 28th. From this point on, state banking moratoria increased rapidly in number, as shown in the accompanying

⁴ *Annual Report of the Federal Reserve Board, 1932, p. 20.*

list, until the morning of March 4th, when practically all of the remaining banks of the country suspended operations.

February

- 14. — Michigan.
- 23. — Indiana.
- 25. — Maryland.
- 27. — Arkansas.
- 28. — Ohio.

March

- 1. — Alabama, Kentucky, Nevada, and Tennessee.
- 2. — Arizona, California, Louisiana, Mississippi, Oklahoma, and Oregon.
- 3. — Georgia, Idaho, New Mexico, Texas, Utah, Washington, and Wisconsin.
- 4. — Colorado, Connecticut, Delaware, Florida, Illinois, Iowa, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, West Virginia, and Wyoming.

As was natural, prior to the complete suspension of banking activities on March 4th, the strain on the New York banks, including the Federal Reserve Bank of New York, was intense. "In the period of a little over three weeks between February 8 and March 3, the withdrawals of currency by member banks from the Reserve Banks were over \$1,700,000,000, the greater part of which occurred in the last week of the period. Out-of-town banks withdrew nearly \$800,000,000 from their balances with New York City banks in order to meet the demands on them, and banks throughout the country found it necessary to draw more and more heavily upon the Federal Reserve Banks for additional credit.

"The reserve position of the Federal Reserve Banks was affected not only by the loss of reserves, but also by a large increase in reserve requirements against Federal Reserve notes outstanding. As a result the excess gold reserves of the Federal Reserve Banks declined to a little over \$400,000,000, as compared with a high point of nearly \$1,500,000,000 in January. The burden fell most heavily on the New York Reserve Bank which was called upon to meet not alone the demands from its own district but large demands from other districts as well. To maintain its reserve position this bank found it necessary to rediscount a substantial amount

of its paper with other Reserve Banks and sell them in addition some of its Government securities.”⁵

The President's Proclamation.—The closing of the New York banks and, with them, of banks which had remained open in other sections of the country, occurred on the day of President Roosevelt's inauguration. On the morning of March 6, 1933, the President proclaimed a nationwide bank moratorium from March 6 to March 9, inclusive, pending the convening of Congress in special session on the latter date. Meanwhile, the President and his aides undertook the task of drafting an emergency bill which would be presented to Congress at the earliest possible moment. The hoarding and export of gold were prohibited by the proclamation as well as the performance of any except a few absolutely essential banking functions.

The Emergency Banking Act.—When Congress convened on March 9th, the administration had its emergency banking bill ready for submission. It was the first measure introduced into Congress and was passed in the record time of seven and one-half hours. It contained four fairly distinct sets of provisions. First, after confirming the previous, and any subsequent, proclamations of the President with respect to the hoarding and export of gold and the reopening of the banks, the act provided that in a period of emergency the President should have the power to prohibit the exportation, earmarking, or hoarding of gold, and to require holders of gold to turn this in at the Treasury in exchange for other moneys. It also gave the President the power to prevent member banks from carrying on any banking business, other than such as might be permitted by the Treasury, for the period of the emergency. Severe penalties for the violation of these provisions were attached.

Second, the law provided that, in order to conserve the assets of national banks in unsound or questionable condition for the benefit of depositors and other creditors, the Comptroller of the Currency might, at his discretion, appoint a conservator for any such bank, the conservator to have the legal status of a receiver and to take complete charge of the

⁵ *Monthly Review*, Federal Reserve Bank of New York, April 1, 1933, p. 26. The list of dates of bank holidays and restrictions given above is taken from this same issue, p. 25.

affairs of the bank. A bank for which a conservator had been appointed might receive new deposits which were to be invested in United States securities, held in cash, or deposited with the Federal Reserve bank. These deposits were to be thus strictly segregated and withdrawable in full on demand. Old deposits, however, were to be subject to such restrictions and limitations on withdrawals as might be determined by the Comptroller of the Currency.

If a bank in the hands of a conservator could be put in sound condition to resume full banking operations, the law provided for the withdrawal of the conservator and the return of the bank to its old management. It was also provided that upon the receipt of written assent of 75 per cent of the depositors, or two-thirds of the stockholders, or both, a reorganization of the bank might be undertaken, the reorganized institution to operate on an unrestricted basis. On the other hand, if the affairs of the bank were hopeless, it was to be liquidated.

Third, it was provided that national banking associations might issue six per cent cumulative preferred stock, with such voting powers and retirement conditions as might be provided in the bank's articles of association with the approval of the Comptroller of the Currency. Such stock was to have a prior lien to the common stock on assets and earnings, and was to carry no added liability. If, in the opinion of the Secretary of the Treasury, a national banking association or state bank or trust company is in need of added capital in connection with its reorganization or otherwise, the Secretary may request the R.F.C. to subscribe to preferred stock in such bank. The powers of the R.F.C. were broadened to permit such subscriptions, and the R.F.C. was permitted, with the approval of the Secretary of the Treasury, to sell this stock later in the open market if conditions should permit.

Fourth, the Federal Reserve Act was amended to permit the Federal Reserve banks to issue Federal Reserve bank notes secured by obligations of the United States up to 100 per cent of the security, or by notes, drafts, bills of exchange or bankers' acceptances acquired by the Reserve banks by discount or purchase up to 90 per cent of the security. No

reserve was required against such issues. Title IV of the act also permitted the Reserve banks, until March 3, 1934, to discount member bank notes secured by any adequate collateral normally not eligible, at a rate one per cent above the regular discount rate of the Reserve bank. The Reserve banks were also permitted to make advances directly to individual business enterprises on the security of United States obligations.⁶

The reopening of the banks.—Armed with the powers conferred by the Emergency Banking Act, the administration made prompt plans for reopening the banks as rapidly as possible. The bank holiday was extended for a few days to permit these plans to be put into effect. Only sound banks were to be permitted to reopen on an unrestricted basis. Sound member banks were required to obtain licenses from the Secretary of the Treasury through their Federal Reserve banks, while non-member state banks received their licenses from the appropriate state authority. Banks not receiving licenses were put into the hands of conservators, or operated on a restricted basis in the case of some of the non-member banks. A bank, to be rated sound, apparently was required to possess rediscountable assets (i.e., sound assets) in an amount equal to its deposits. Thus, if, upon reopening, depositors demanded their money, these assets could be rediscounted at the Reserve banks to obtain Federal Reserve bank notes, and the depositors could be paid in full. The President, by proclamation, also required the holders of gold to turn it in at the banks in exchange for other moneys, thus strengthening the gold reserves of the Federal Reserve banks.

Sound banks throughout the country were permitted to open in the following order : On Monday, March 13, 1933, all sound banks in the twelve Federal Reserve cities were reopened ; on Tuesday, banks in about 250 clearing house cities were reopened ; and on Wednesday, all of the remaining sound banks were reopened. Thus, by March 15, 1933, banks controlling about 90 per cent of the banking resources of the country were again doing business on an unrestricted basis. Depositors displayed no distrust in the reopened

⁶ An amendment to the Emergency Banking Act, dated March 24, 1933, allowed the Reserve banks to make direct loans to non-member banks and trust companies during the emergency.

banks, deposits exceeding withdrawals in all sections, so that small use was made of the new Federal Reserve bank notes authorized by the emergency act. The rapid improvement in the banking situation is evidenced by the following quotation from the *Monthly Review* of the Federal Reserve Bank of New York :⁷

The total return flow of currency of all kinds in the three weeks ended March 29 was \$1,185,000,000. A large part of the proceeds of this currency was used to retire Federal Reserve credit, and the indebtedness of member banks at all Federal Reserve Banks declined from more than \$1,400,000,000 just before the middle of March to \$545,000,000 on March 29. A moderate amount of Federal Reserve credit in other forms was also retired, and in addition the total reserves of member banks were increased by \$211,000,000. In New York City the indebtedness of the principal banks at the Reserve Bank was reduced from well over \$600,000,000 before the middle of March to \$84,000,000 on March 29, and on that date some of the New York City banks again held moderate amounts of excess reserves.

Despite the admirable courage and promptitude with which the administration met the emergency, some sections of the country suffered severely as a result of the emergency measures. Certain smaller towns and cities were left without any banking accommodation whatever for long after the termination of the general moratorium. At the end of May, 1933, as among member banks only, 1163 banks with deposits of \$1,856,427,000 were still not licensed to do business on an unrestricted basis,⁸ while probably an equal amount of deposits was immobilized in unlicensed non-member banks. Nevertheless, the opportunity which the emergency offered for far-reaching fundamental reform in the banking system would, if grasped, have proved of sufficient importance to the future welfare of the country to offset the inconvenience and suffering which accompanied the crisis.

The extent to which advantage was taken of the opportunities for reform offered by the crisis will be considered in the following section of the chapter.

THE BANKING ACT OF 1933

Introduction.—Even before the culmination of the banking crisis hearings had been held in both houses of Congress

⁷ *Op. cit.*, p. 26.

⁸ *Federal Reserve Bulletin*, June 1933, p. 341.

as a precedent to reform legislation. As a result of the investigation of the Banking and Currency Committee of the Senate, a reform bill was introduced into Congress which, in modified form, finally passed and was approved by the President on June 16, 1933, under the title of the Banking Act of 1933.

The provisions of the law. — The provisions of the Banking Act of 1933 may be grouped under three heads: (a) those pertaining to the Federal Reserve Board and the control of credit; (b) those pertaining to the practices and organization of commercial banking institutions; and (c) those applying to investment affiliates and designed to separate investment from commercial banking. The last of these is discussed in a later chapter. It is to the provisions of the first two groups that attention will be directed in the following pages.

The Federal Reserve Board and the control of credit. — As a result of the inability of the Federal Reserve to control the expansion of credit for purposes of stock market speculation in 1928 and 1929, the earlier drafts of the Glass Bill contained rather stringent restrictions designed to prevent a recurrence of the conditions obtaining in those years. These measures were modified somewhat in the legislative course of the bill, but the Banking Act of 1933 still retained a number of provisions looking to this end, as well as other amendments pertaining to Federal Reserve policy.

Control of speculative credit. — In an attempt to preclude the use of Federal Reserve credit for improper purposes, the act provided that:

Each Federal Reserve bank shall keep itself informed of the general character and amount of the loans and investments of its member banks with a view to ascertaining whether undue use is being made of bank credit for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions; and, in determining whether to grant or refuse advances, rediscounts or other credit accommodations, the Federal Reserve bank shall give consideration to such information. The chairman of the Federal Reserve bank shall report to the Federal Reserve Board any such undue use of bank credit by any member bank, together with his recommendation. Whenever, in the judgment of the Federal Reserve Board, any member bank is making such undue use of bank credit, the Board may, in its discretion, after reasonable notice and an opportunity for a hear-

ing, suspend such bank from the use of the credit facilities of the Federal Reserve System and may terminate such suspension or may renew it from time to time. Sec. 3 (a).

Of similar intent, but more workable, was the provision (Sec. 7) that the Federal Reserve Board, upon an affirmative vote of six members, should have the power to fix the proportion of individual member bank capital and surplus in each district which may be represented by loans secured by stocks and bonds, upon penalty of suspension of all discount and rediscount privileges at the Federal Reserve banks.

In order to prevent the expansion of "loans for the account of others," which largely destroyed the efficacy of Federal Reserve credit policy in 1928-1929, the act, Sec. 11 (a), prohibited any member bank from acting "as the medium or agent of any non-banking corporation, partnership, association, business trust, or individual in making loans on the security of stocks, bonds, and other investment securities to brokers or dealers in stocks, bonds and other investment securities."

Advances to member banks.—In addition to rediscount powers, the Federal Reserve banks were permitted (Sec. 9) to make direct advances for fifteen-day periods to member banks on their promissory notes secured by government obligations (including debentures of the Federal intermediate credit banks), and for ninety-day periods when the member banks' promissory notes were secured by eligible paper. Such advances were to become immediately due and payable by any member bank that increased its security loans for speculative or carrying purposes beyond the limit set by the Federal Reserve Board, after due warning by the Federal Reserve bank. Short-term secured loans for the sole purpose of facilitating the distribution of securities which have been publicly offered were, however, exempt from this restriction.

Federal Open Market Committee.—Section 8 of the act created a Federal Open Market Committee, consisting of one member from each Federal Reserve district, members to be chosen by the directorates of the several reserve banks. The Committee was to meet four times a year in Washington and was given complete control of open market policy. Members of the Federal Reserve Board might meet with the Com-

mittee. This provision merely legalized the Open Market Policy Conference as the new Committee had powers and functions identical with those formerly vested in the Conference and had the same number of members chosen in the same way.

Supervision of foreign relations.—The Federal Reserve Board, by Sec. 10, was given complete supervisory authority over all relationships or transactions entered into between foreign banks or bankers and any Federal Reserve bank or its officers. The Board might be represented at any conference arising in these connections, and full reports of all transactions or negotiations of this character had to be filed with the Board.

The foregoing provisions of the Banking Act of 1933, were properly directed and in most cases were sound and commendable. Although in part clumsy and difficult to administer, they gave the Federal Reserve authorities ample power to prevent a recurrence of the 1928–1929 situation should they desire to put the stated provisions into effect.

Provisions pertaining to commercial banks.—The second group of provisions, which pertained to the practices and organization of commercial banking institutions, affected national, state member and, in certain instances, nonmember banks in a variety of ways. The more important provisions of this group will receive attention in the following paragraphs.

Membership in the Federal Reserve system.—The act permitted Morris Plan banks or other incorporated banking institutions of a similar nature to become members of the Federal Reserve system. Mutual savings banks with no capital stock, but with surplus and undivided profits equal to the capital requirements of member banks, were also permitted to join the Reserve system upon subscribing to stock in the Federal Reserve bank in an amount equal to six-tenths of one per cent of their total deposit liabilities.

Deposit insurance.—The act contained elaborate provisions for the organization and operation of a Federal Deposit Insurance Corporation. The management of the Corporation was vested in three directors, the Comptroller of the Currency and two directors appointed by the President

for terms of six years each. The capital stock of the Corporation was to be of two kinds, Class A and Class B, of \$100 par value. Class A stock was to be subscribed to by banks participating in the insurance plan in an amount equal to one-half of one per cent of their total deposits, one-half of such subscription to be paid in full and one-half to be subject to call. Class A stock was entitled to cumulative dividends of six per cent or thirty per cent of the net earnings in any one year, whichever was greater. No voting power was carried by this class of stock.

The Class B stock of the Corporation was to be subscribed for by the Federal Reserve banks in an amount equal to one-half of their surplus on January 1, 1933, one-half of this subscription to be paid at once, the remainder being subject to call. Class B stock was entitled to no dividends.

The law also provided for subscription by the Treasury to stock in the Corporation in the amount of \$150,000,000, subject to call by the directors in their discretion. On stock actually paid for by the Treasury, dividends were to be paid in the same amount and manner as on Class A stock.

In addition to funds obtained through subscriptions to stock, the Corporation was empowered to issue and sell notes, debentures, bonds or short-term bills in an amount not greater than three times its capital. Funds of the Corporation not otherwise employed might be invested only in obligations of the United States, although for temporary periods funds might be deposited in the Federal Reserve banks or with the Treasury. The Corporation might be designated as a depository of public moneys, other than customs receipts, and might be employed as financial agent by the government.

The purpose of the Corporation was to insure the payment of depositors of banks which owned stock in the Corporation and which became insolvent. Provision was made for the payment in full of individual net deposits in amounts not exceeding \$10,000; 75 per cent of amounts in excess of \$10,000, but not over \$50,000; and 50 per cent of amounts in excess of \$50,000. Different accounts held for the benefit of a single depositor were to be considered as a single deposit for purposes of determining the amount paid to depositors of failed banks.

The procedure of the Corporation, in the event of the failure of a participating bank, was complicated and need merely be sketched in broad outlines. In case of the failure of a national bank, the Comptroller of the Currency was required to appoint the Corporation as receiver. The Corporation was then required to establish a new national bank, without capital stock, to take over the liabilities of the failed institution. Depositors of the insolvent bank might then withdraw their deposits, in the amounts specified in the preceding paragraph, or might leave them on deposit with the new bank. In the latter case, they were to be segregated. The Corporation was to furnish the new bank with the necessary cash to pay depositors. After the new bank had been organized, the Corporation would undertake the liquidation of the assets of the failed bank, reimbursing itself for deposits paid out, and making additional payments on (or giving credits to) the large deposits if the funds obtained from the liquidation were sufficient. The Corporation was authorized to sell stock in the new bank, to stockholders of the failed bank or to others, if desirable and possible to do so, whereupon the new bank would become a regularly operating national banking association. If stock had not been sold, or the assets sold to an existing bank, after two years, the new bank was to be voluntarily liquidated.

The procedure was somewhat more complicated with respect to failures of participating state banks, because of state laws regarding receiverships, but in general it followed similar lines, a new national bank being established to take over the liabilities of the insolvent institution.

Participation in the deposit insurance plan was required of all national and state member banks after July 1, 1934, subject to forfeiture of charter or of membership in the Federal Reserve system, respectively, for failure to subscribe to stock in the Corporation. Non-member banks which agreed to submit to examinations and to subscribe to the required amount of stock in the Corporation were to be permitted to participate in the insurance plan until July 1, 1936. Thereafter, non-member banks might only be insured, after having applied for membership in the Federal Reserve system, during the period in which their application for membership was

under review. To cover the period from January 1, 1934, to July 1, 1934, when the Corporation was to begin its regular operations, a temporary deposit insurance fund was provided for. Payments to depositors of failed banks under this fund were limited to \$2500, and subscriptions to the fund were limited to one-half of one per cent of the insured deposits only.

Branch banking provisions.—Under the Banking Act of 1933, national banking associations were allowed to establish branch offices (1) in the city, town, village or county in which the parent bank was located, if the state chartered banks were allowed similar privileges, and (2) at any point throughout the state at which state chartered banks were specifically authorized to establish branches. A national bank having out-of-town branches was required to have a minimum capital stock of \$500,000, except that, in states having less than 1,000,000 population with no cities of more than 100,000 population, the minimum requirement was \$250,000, and in states having a population of less than 500,000 with no cities over 50,000, the minimum capital required was \$100,000. The aggregate capital of any national bank with branches must not be less than the aggregate minimum capital required for the establishment of an equal number of national banks situated in the places where such bank and its branches are situated.

Control of chains and groups.—In order to bring about a better control of chain and group systems of banks, the act provided that no holding company, controlling the stock of a national bank, should be allowed to vote such stock at shareholders' meetings unless it had a voting permit from the Federal Reserve Board. In order to obtain such a permit, the holding company must agree to (1) the examination of all of the banks controlled by it, and (2) the publication of reports of condition in the form of individual or consolidated statements. If, because of infraction of the agreement, the voting permit was rescinded, no national bank controlled by such a company was to be allowed to hold deposits of public moneys or to pay dividends to the holding company.

In order to obtain a voting permit, the holding company had further to agree (1) not to own, control or participate in any way in the management of an enterprise engaged in the investment security business, (2) to build up a surplus to

care, in part, for the double liability feature of bank stocks held by it, and (3) to declare dividends only out of actual net earnings.

Where control was vested in a bank rather than in a holding company, any national or member bank must obtain from the controlling bank an agreement to submit to adequate examination and control. State member banks belonging to holding company groups must also obtain similar agreements, or forfeit their membership in the Federal Reserve system.

Investments of national banks.—The act limited the purchase of investment securities by national banks for their own account to an amount not to exceed 10 per cent of an issue of any one obligor which is outstanding at any time. The total amount of investment securities of one obligor or maker purchased by a national bank, after the law took effect, was also limited to 15 per cent of the paid-in capital and 25 per cent of the unimpaired surplus of the purchasing bank. The term "investment securities" was defined to mean bonds, notes and/or debentures, and did not include stocks. Obligations of the United States, any state or political subdivision thereof, issues under the Federal Farm Loan Act, and issues of the Federal Home Loan Banks or the Home Owners' Loan Corporation were exempted from these limitations.

Capital requirements.—Minimum capital requirements for national banks were increased for the smallest banks, the organization of national banks with a capital of \$25,000 in places of less than 3000 inhabitants being prohibited after the date of approval of the act. Other capital requirements remained as before, with the exception of national banks with branches, for which the capital requirements have already been noted.

Interest payments and charges.—The act prohibited member banks from paying interest on demand deposits and authorized the Federal Reserve Board to fix, from time to time, the interest to be paid on various classes of time and savings deposits in the different districts.

In addition to regulating the rate of interest to be paid on deposits, the act permitted national banking associations to charge interest on loans and discounts at the legal rate in the state of location or at a rate of one per cent above the Federal

Reserve bank discount rate on ninety-day commercial paper, whichever was higher, and no more, unless a different rate was limited for state banks, in which case that rate might be charged if desired. Where no rate was fixed by state law, the association was allowed to charge at a maximum of seven per cent or one per cent above the Reserve bank rate on ninety-day commercial paper, whichever was higher.

Miscellaneous provisions.—The act sought to increase the safety of operation of member banks in a number of ways. First, if in the opinion of the Comptroller of the Currency or of the Federal Reserve agent, any director or officer of a national or state member bank should continue to violate any law or to pursue any unsound practices after having been duly warned, the facts might be certified to the Federal Reserve Board. The Board might then require said officer or director to appear before it and show why he should not be removed from office. If the said officer or director should not satisfy the Board or if he should continue his violation of law or pursuit of unsound practices, the Board might order his removal from office.

Secondly, the act prohibited executive officers of member banks from borrowing from any member banks of which they were executive officers, and prohibited member banks from making loans to their executive officers. An executive officer of a member bank borrowing from a non-member bank of which he was also an executive officer was required to make a written report to the chairman of the board of the member bank giving all particulars concerning the loan.

Thirdly, the directorates of member banks were limited to not less than five and not more than twenty-five directors, and each director was required to own in his own right shares of the bank having a par value of \$2500, unless the bank's capital did not exceed \$50,000 or \$25,000, when the holding of stock required was \$1500 and \$1000 respectively.

In addition to the provisions just noted, an alteration was made in the method of distributing earnings of the Federal Reserve banks. The tax payable to the government was abolished, all net earnings in excess of the six per cent cumulative dividend to be carried to surplus by the Federal Reserve banks.

The act also provided that shares of national banking associations issued after the date of enactment of the act should not bear the additional liability previously imposed on shareholders of national banking associations.

Conclusion. — Considered as a fundamental reform measure, the Banking Act of 1933 is open to criticism. While a number of its provisions were sound and satisfactory, it failed to attack the more fundamental problems of banking reform. Its elaborate provisions for deposit insurance were not scientifically worked out and were quite unsatisfactory. Its branch banking provisions were entirely inadequate to meet the country's need for larger and better-managed banking institutions. Admirable provisions for the segregation of assets behind time and thrift deposits, which had been contained in the original bill, were eliminated from the final act. The need for a united banking system was approached only indirectly by requiring insured banks to join the Federal Reserve system after a lapse of two years. The provisions regulating the investments of national banks were both inadequate and discriminatory. The reserve requirements for member banks, which were sadly in need of revision, remained untouched.

In spite of these defects, the Banking Act of 1933 was probably as satisfactory a piece of legislation as could have been expected in the circumstances.

THE BANKING ACT OF 1935

Introduction. — Although the Banking Act of 1933 had been designed as a piece of fundamental legislative reform, it was not long before further reform legislation was suggested. This second banking reform law may be attributed to the efforts of Mr. Marriner S. Eccles, Governor of the Federal Reserve Board, who felt that the task of credit control, to be satisfactorily accomplished, required a greater concentration of power in the hands of the Board than existed at the time. In any event, in February 1935, Mr. Eccles submitted to the House Banking and Currency Committee a reform bill which contained three titles. Title I was concerned entirely with deposit insurance, amending substantially the original provisions of the Banking Act of 1933. Title II

contained provisions designed to increase the powers of the Federal Reserve Board, and Title III consisted of technical amendments to existing banking laws.

The bill was given extended consideration by both Houses of Congress and finally became law on August 23, 1935.

Provisions of the Act. — In considering the Banking Act of 1935, we shall first review the provisions of Title II, which contained the most disputed portions of the Eccles bill and which were changed substantially in the final act. Titles I and III, which were enacted substantially as submitted in the original bill, will then receive attention.

The Board of Governors of the Federal Reserve System. — The name of the Federal Reserve Board was changed to the Board of Governors of the Federal Reserve System. It was provided that this Board should consist of seven appointive members serving for terms of 14 years each. It was also provided that members of the Board of Governors should be so appointed by the President that the term of one member should expire every two years. The President was authorized to appoint the entire new Board of Governors by February 1, 1936.

Of the seven members of the Board of Governors, two were to be designated by the President as chairman and vice chairman, respectively, to serve in this capacity for four years of their terms. Salaries of Board members were fixed at \$15,000 and no member was to be allowed to serve more than one full term. The Secretary of the Treasury and the Comptroller of the Currency were dropped as ex officio members of the Board.

Management of Federal Reserve banks. — It was provided that the board of directors of each Federal Reserve bank shall elect a president to serve for a five-year term subject to the approval of the Board of Governors. The president was to be the chief executive officer of the bank to whom all other employees were to be responsible. Provision was also made for the selection, in similar manner, of a number of vice presidents, the first vice president to fulfill the duties of president in the latter's absence.

Open market operations. — The act provided for a re-organized Federal Open Market Committee consisting of the

entire Board of Governors and five representatives of the Federal Reserve banks to be selected by their boards of directors as follows: one by the Boston and New York banks; one by the Philadelphia and Cleveland banks; one by the Chicago and St. Louis banks; one by the Richmond, Atlanta and Dallas banks; and one by the Kansas City, Minneapolis and San Francisco banks. This committee was given entire charge of open market policy and its decisions were made binding upon the Federal Reserve banks. The Committee was authorized to direct the purchase of direct or guaranteed obligations of the United States without regard to maturities, but such purchases must be made in the open market.

Discount rates and powers.—The act provided that discount rates should be established by the Federal Reserve banks every two weeks or oftener if deemed necessary by the Board of Governors. Member banks were permitted to obtain advances from their Reserve banks secured by any satisfactory assets at a rate of discount $\frac{1}{2}$ of 1 per cent above the discount rate on eligible paper, but such advances were limited to four months' maturity. The purpose of this provision was to enable member banks to obtain accommodation from the Reserve banks at a penalty rate in times of emergency.

Alteration of reserve requirements.—It was provided that the Board of Governors, upon the affirmative vote of four members, might change reserve requirements of member banks in order to prevent injurious credit expansion or contraction, but reserves were not to be raised by more than 100 per cent or to be lowered below the requirements existing at the time of passage of the act.

Federal Reserve notes.—A provision of the Eccles bill under which Federal Reserve notes might be issued against the general assets of the Federal Reserve banks was eliminated in the final act. Thus Federal Reserve notes continued to require specific security as in the past.

Real estate loans.—Under the Banking Act of 1935, real estate loans by national banks up to 50 per cent of the value of the property and with a maturity of five years were permitted. Loans secured by amortized mortgages, however, were permitted up to 60 per cent of the appraised value of the property with a maturity of ten years if the installment

payments on the mortgage are sufficient to amortize 40 per cent of the principal in that length of time. Aggregate real estate loans for any national bank were limited to the lending bank's capital and surplus or 60 per cent of its time and savings deposits, whichever is greater.

Titles I and III.—Title I of the Banking Act of 1935, dealing with deposit insurance, was virtually the same as that of the Administration bill.⁹ Under this Title, insurance was limited to \$5000 per account. The premium to be paid by insured banks was fixed at $\frac{1}{12}$ of 1 per cent on average deposit liabilities over a six-month period, payments to be made semi-annually. State non-member banks having average deposits of \$1,000,000 or more were required to join the Federal Reserve system by July 1, 1942, in order to retain insurance benefits, but smaller non-member banks were not required to join the system. Thus the attempt to force non-member banks into the system under the deposit insurance provisions of the Banking Act of 1933 was largely nullified. The Secretary of the Treasury was authorized to purchase obligations of the F.D.I.C. and was required to purchase an additional \$250,000,000 of the obligations of the corporation.

Remaining provisions of Title I had to do with examinations of insured banks, fixing the rate of interest on time and demand deposits of insured non-member banks, and other technical matters with which we need not here be concerned.

The majority of the provisions of Title III did not greatly change existing banking law except to make existing provisions more workable. A few changes, however, were significant. It was provided that newly organized national banks must begin business with a paid-up surplus of 20 per cent of their capital, and state member banks must carry not less than half their net profits to surplus until the latter equals 20 per cent of their capital. The act also provided that any national bank might terminate its existing double liability on its stock on or after July 1, 1937 by publishing a single newspaper notice six months prior to such termination. As

⁹ It should be mentioned that the temporary insurance plan, which was to terminate on June 30, 1935, was extended by S. J. Res. No. 152, approved June 28, 1935, to August 31, 1935, in order to allow for the delay which developed in the passage of the banking bill.

a protection to depositors, however, national banks were required to carry one-tenth of their profits to surplus until the surplus should equal the capital of the bank.

Title III also changed the method of computing reserve requirements by permitting the deduction of collection items and due from banks from gross demand deposits instead of from due to banks only as had previously been the case. United States deposits, which had previously not been subject to reserve requirements, were included in gross demand deposits.

Title III also repealed the provision of the Banking Act of 1933 which required directors of member banks to own outright a specified amount of stock in the institutions in which they were directors. This was unfortunate, as substantial stock ownership is an incentive to greater interest in the affairs of the bank on the part of directors.

Subsequent amendments.— Since the passage of the Banking Act of 1935 there has been little Federal banking legislation of significance for our purposes. Two amendments, perhaps, should be noted. The Act of June 20, 1939 repealed the provision that non-member insured state banks with average deposits of \$1,000,000 or more must become members of the Federal Reserve system after July 1, 1942. The effect of this is to relieve all non-member banks of any pressure to join the Federal Reserve system in order to retain their deposit insurance. An act of June 30, 1939, authorized the Board of Governors of the Federal Reserve system to permit the use of direct obligations of the United States as collateral for Federal Reserve notes until June 30, 1941, thereby extending this authority which would otherwise have expired on June 30, 1939.

The present banking system.— The banking system of the United States has shown substantial changes in the decade since 1930. The number of banks decreased from 24,079 on June 30, 1930, to 15,006 on March 26, 1940. This is explained in large part by the numerous failures which occurred in the great depression and the banking crisis of 1933. The percentage of total banking resources and liabilities held by member banks of the Federal Reserve system increased. On March 26, 1940, loans and investments of

member banks constituted 67 per cent of the total, as compared with 61 per cent in 1930, while deposits of member banks had increased even further to nearly 69 per cent of total deposits. If deposits of non-member mutual savings banks are excluded, over 83 per cent of all other deposits in March 1940 were held by member banks. The number of member banks, while declining with the decrease in the total number of banks (to 6,377) constituted 42.5 per cent of all banks as compared with about 35 per cent in 1930.

Since 1930, there has been some increase in branch banking and some decline in group banking activity. The so-called commercial banks have become more and more of the department-store type, performing various trust and banking functions of a non-commercial nature. These and other phases of the existing system will be discussed in detail at later points in the text.

Conclusion. — In this and the preceding chapters we have been concerned with the development of the banking system of the United States through its various stages to the present time. In the chapters which follow, we shall turn our attention to a detailed analysis of the commercial banking process as it is carried on in the United States.

REFERENCES

- Bogen, J. I. and Nadler, M. *The Banking Crisis: the End of an Epoch.* New York. 1933.
- Myers, W. S. and Newton, W. H. *The Hoover Administration.* New York. 1936.
- Sullivan, L. *Prelude to Panic.* Washington. 1936.
- Weissman, R. L. *The New Federal Reserve System: The Board Assumes Control.* New York. 1936.
- Wilbur, R. L. and Hyde, A. M. *The Hoover Policies.* New York 1937.
- Annual Reports of the Board of Governors of the Federal Reserve System. Banking's Reference Supplement, 1935.*
- Federal Reserve Bulletin.*

PART II

THE COMMERCIAL BANKING PROCESS

CHAPTER XI

BANK NOTES

The importance of bank notes.— In the present chapter, it is proposed to enter into a thorough consideration of one of the two types of money for which the banking system is primarily responsible, namely, the bank note. In most of the continental countries of Europe, where the use of checks as means of payment is still decidedly limited, the bank note constitutes one of the outstanding elements of the monetary system. In England, Canada, and the United States, the importance of this instrument is somewhat dimmed by the wide use of checks in a monetary capacity ; yet even in these countries, the bank note is the most widely used form of hand-to-hand money (money which circulates without indorsement) in the more sizeable denominations. If money is defined, as we have defined it, as anything which is used primarily as a medium of exchange, the significance of the bank note as one form of money becomes obvious.

It should perhaps also be pointed out that, in modern countries, the issue of bank notes is confined almost exclusively to the central bank. With few exceptions, central bank notes constitute the bulk of the hand-to-hand circulation in modern countries. Nevertheless, the principles set forth in the following pages apply to central bank note issues as well as to those, more prevalent in former years, of the commercial banks of the country.¹

Bank notes a form of credit money.— A bank note is the formal promise of a bank to pay to the bearer on demand a certain designated sum in standard money or some form of government credit money. Upon the acceptance of a bank note, the recipient enters into a debtor-creditor relationship

¹ As noted hereafter (Chapter XXIV), national bank notes were retired in 1935. The chartered banks of Canada still issue notes, but the amount is limited (and decreasing) eventually to 25% of paid-up capital. In other countries the central bank has a practical monopoly of note issue.

with the issuing bank, the bank becoming the debtor and the noteholder the creditor. The bank note is thus, legally, a form of credit instrument, but, from the point of view of monetary theory, the mere existence of this debtor-creditor relationship is of less significance than the economy in the use of government money which may, and usually does, result from the use of bank notes. If the system of note issue is satisfactory, bank notes will be readily accepted in exchange for goods and services, and seldom, if ever, will the issuing bank be confronted with the necessity of redeeming any large proportion of its note issues at any one time. In consequence, it is not necessary for the issuing bank to keep 100 per cent of its circulating notes in the form of government money for redemption purposes. Actually, the redemption reserve which must be maintained to insure safety is but a fraction of the notes in circulation, and an important economy of government money is thereby effected. In order that bank notes shall act satisfactorily in the performance of the monetary functions, however, it is necessary that the system of note issue shall comply with three definite requirements. (1) The bank note issues must be kept at par with standard money ; (2) they must be adequately secured ; and (3) they must have elasticity of the proper sort. We shall now consider these three prime requisites of a satisfactory system of note issue in the order in which they have been named.

PARITY

The necessity for maintaining bank notes at par.—It should be obvious that bank notes must be maintained at par with the standard money if they are not to disrupt the smooth working of the entire monetary system. Every dollar should be kept equal in value to every other dollar. If this is not done, the cheaper money will only circulate at a discount, with an attendant disruption of trade, or, if it has substantial legal tender powers, it will drive the better money out of circulation, if issued in excess, and usurp the place of the standard. The notes of many of the European central banks are granted legal tender powers, but the issues of other banks are not likely to be given legal tender rights

in any substantial degree, and the circulation of the latter type of notes at a discount is likely to result from inadequate regulations for maintaining them at par with the standard money. In either event, it is necessary to inquire into the nature of the regulations which are essential to the maintenance of parity.

Ready convertibility. — The most important requirement for the maintenance of parity is that the notes shall be readily convertible into standard money, or, at least, into government legal tender which is itself convertible. The use of the word *readily* in the preceding sentence must be emphasized. In a country of large size it is not sufficient merely to provide for the redemption of notes over the counter of the issuing bank. A note may be in circulation at a point far distant from the bank that has issued it, in which case the process of getting the note to the bank of issue and obtaining the corresponding amount of government money from that bank is annoying and, to a certain extent, costly, so that a local banker would not be inclined to redeem the note without deducting a certain amount from its face value to pay for the trouble and expense of sending it home for redemption. An excellent illustration of this is to be found in the set of circumstances which led to the development of the Suffolk system in Boston and New England in the early part of the nineteenth century. The notes of the New England country banks got into circulation in Boston where they could be redeemed only through the cumbersome and costly procedure of sending them back to the issuing banks. Consequently, when holders of country bank notes presented them to the Boston banks for redemption, a discount commensurate with the expense of sending the notes back to the issuing banks was deducted from the face of such notes by the Boston bankers. These bankers, on the other hand, were forced to redeem their own notes at par. The result was that the citizens of Boston kept the country bank notes for ordinary spending purposes and brought in the notes of the local banks for redemption whenever they needed specie, with the result that the Boston institutions had difficulty in keeping their own notes in circulation, while the notes of the country banks continued to circulate.

The remedy adopted by the Suffolk Bank of Boston was to redeem the notes of the country banks at par and then persuade the latter institutions to maintain deposits with it for this purpose by threatening to collect quantities of their notes and send them home for redemption in large amounts. Such a procedure would have proved embarrassing to the country banks (and, in fact, did prove so in the cases where the Suffolk Bank was forced to use this method against recalcitrant institutions), so that they all agreed, sooner or later, to keep the necessary deposits with the Suffolk Bank. After that, the notes of the country banks circulated readily at par, both in Boston and in other parts of the surrounding territory.²

The ready convertibility of bank notes may best be accomplished by maintaining a number of redemption agencies at conveniently located points, preferably in financial centers where the surrounding country bankers will be likely to have deposit accounts. Under such a system, any country bank would be willing to redeem another bank's notes at par, even though the latter institution were located at a distant point, for it could use those notes for the purpose of building up its balance in some nearby financial center where a redemption agency was maintained. The banks in the financial centers also would redeem notes of distant banks at par since such notes could be converted into government money locally through one of the established redemption agencies. Or, in place of such a plan, the government might itself act as a redemption agency and provide for the conversion of the notes at a number of conveniently located points.

Other devices to insure parity. — In addition to the provisions mentioned, certain supplementary devices may be employed to insure the maintenance of parity. Such notes may, for instance, be accepted by the government as valid tender in the payment of taxes. In this case, even if the notes were not conveniently redeemable, they would be likely to remain at par if not issued in too great amounts. As long as the government will make its own disbursements in standard money if requested, yet will receive some other type of money in the payment of taxes and imposts, an indirect

² White, *Money and Banking*, Chapter IX.

system of redemption is set up which will keep the other money at par with the standard. Individuals receiving bank notes with such tender privileges will use them to pay taxes and take some other type of money to the bank to be redeemed in standard money if the latter is desired.

In somewhat similar fashion, when the privilege of note issue is permitted to all the members of a given class of banks, the law may provide that such notes must be accepted at par by any bank in this group whether it happens to be the issuing bank or not. If banks of the issuing class are numerous, and hence are to be found in practically every community, it will prove easy to utilize the bank notes in the payment of bank debts or in the making of deposits, and there will be practically no tendency for the notes to depreciate in value, relatively to the standard money, even if the issuing bank is in some distant locality. Provisions of this sort, when combined with a judicious use of territorial redemption agencies, will prevent any departure in the value of the bank notes from that of the standard money.

Reserves against note issues. — Although machinery for the redemption of notes in the form of agencies at convenient points may be established, the final responsibility for converting any given bank note into lawful (government) money lies with the issuing bank, and it is therefore necessary for that institution to maintain some sort of reserve of lawful money for this purpose. The considerations which enter into the determination of the proper size of such bank note reserves will receive treatment at a later point in connection with the discussion of the value of money. For the present it is merely necessary to note that reserves of this sort must be maintained, and that the legal regulations governing the issuance of bank notes usually specify what proportion of the issuing banks' notes in circulation shall be held in lawful money for redemption purposes. In some countries, as in Canada until 1934, the size of the reserve which is held is left to the discretion of the issuing bank, but in most cases definite reserve percentages are specified by law. Such legal reserve requirements, where they exist, come under the head of regulations designed to insure parity since the other regulations discussed cannot be made to operate effectively unless

the issuing bank is prepared to redeem such notes as are finally presented to it, by either the redemption agencies, the government, or others.

SECURITY

Free credit issues.—With bank notes, as with any other credit instrument, the question of the security behind the notes is important. If no specific security is required by law to be kept behind issues of bank notes, and if the law imposes upon the issuing bank no special restrictions for the protection of noteholders, the resulting issues of bank notes are of the type which we shall call free credit issues. In the case of free credit issues, the noteholder is a general creditor of the bank issuing the notes and ranks along with the depositor as regards his claim on the assets of the bank. If the bank fails, the assets will be liquidated and the depositors and noteholders will fare equally well or poorly with respect to the settlement of their claims. If the amount obtained from the sale of the bank's assets is sufficient to pay 75 cents on the dollar only, the noteholders, along with the depositors, will be forced to take a loss of 25 per cent. The only security behind the bank notes under such a system is the general condition or ultimate solvency of the banks which issue the notes.

Should the noteholder receive special protection?—As a matter of fact, systems of note issue of the sort described do not exist in modern monetary systems. Such a system would have to operate on the assumption that there is no greater reason for protecting the noteholder than the ordinary bank depositor, and modern nations have been unwilling to proceed upon this assumption and have taken action to give some special sort of protection to the noteholder. On the whole, legislation designed to protect the bank noteholder is justifiable for the following reasons: (1) The recipient of a bank note may well be quite unconscious of the fact that, in accepting the note, he has become the creditor of a given bank. These notes have the same general appearance as other kinds of paper money and will ordinarily be taken without thought as to whether they are the obligations of a bank or of the government. The bank depositor, on the

contrary, is always conscious of his action when he deposits his funds with a given bank. (2) Even when an individual is conscious of the fact that he is receiving a bank note, he is frequently not in a position to refuse it should he desire to do so. The merchant, for example, dare not object too strenuously nor too often to the money tendered him by his customers, lest they become disgruntled and quit him for some less particular competitor. (3) In most trade transactions of the type in which bank notes are used, there is scant time for reflection in making the decision. A person must either accept or refuse the note, it being quite out of the question for him to ask for a couple of days to think it over before he decides whether to take the note or not. (4) In earlier years, it was also maintained that the depositor was in a position to ascertain the soundness of the local bank in which he opened an account if he wished to take the trouble to do so. This reasoning is of doubtful validity as the information to which the ordinary depositor has access is frequently meager. This is the reason for the deposit insurance provision of the Banking Acts of 1933 and 1935. Nevertheless, the depositor has a better chance of obtaining information than the holder of the note of a bank located in a distant community. In any event, governments have recognized the difficulty of the noteholder and, until recently, have given him protection which the depositor did not enjoy.

Because of the reasons noted, it has for years been the custom of governments to provide the noteholder with various types of protection which were not applicable to the depositor or ordinary creditor.

Regulated issues.—Under this head we shall group all note issues which are subject to legal regulations of a general character which are designed to protect noteholders, but which do not require the issuing banks to maintain specific security behind their notes in circulation. Numerous regulations of this sort are to be found in the systems of note issue of different countries. Restrictions may be placed on the *number* of banks allowed the note issue privilege. Thus, in many foreign countries, this privilege is practically confined to the central bank of the system. Such a restriction, even when unaccompanied by others, adds materially to the protec-

tion enjoyed by the noteholders. The central bank is probably less likely to fail than any other bank in the system because of its conservative management and close relationship with the government. Then, also, most business men are familiar with the periodical reports of condition issued by the central institution, the appearance of which is a matter of wide general knowledge and interest. Again, as in England, not only is the power to issue notes confined to the central bank, but to a distinct *department* of that bank which is entirely separated from the banking department. This further restriction adds to the security of the note issues by insuring that the banking department does not utilize the power to issue notes in the furtherance of its own ends.

Another method of regulating note issues is to limit the *amount* of notes which a given bank may issue. This may be done directly by specifying a certain figure above which note issues may not go, or indirectly by limiting the issuance of the notes to those of *higher denominations* or by *restricting the territory* in which the notes may circulate. The direct method was exemplified in France where, prior to 1928, the law specified the upper limit to the note issues of the Bank of France. In some other countries, as Canada, for example, issues are limited to the paid-in capital of the chartered banks, and such limits on note issue may be classed as direct. With regard to the indirect methods of limiting the amount of bank note issues, a further word of explanation seems advisable. By restricting the bulk of the notes issued to the higher denominations, it becomes more difficult to put the notes into circulation, as few individuals will be willing to accept the larger notes since they will not be able to dispose of them readily in the ordinary course of business. In restricting the territory in which the notes may circulate, the amount of notes which may be issued is clearly limited to a greater extent than if no such restriction prevailed. Restriction of territory may be accomplished by forbidding the banks of any one region to pay out over the counter the notes of banks located in other regions. Banks receiving the notes of other sections of the country will then have to send them home (or to the nearest redemption agency) for redemption and the notes will thus be withdrawn from circulation in that

district. The law may also confer upon bank notes certain limited legal tender privileges in the district in which they are issued, but may not allow such privileges in any other region. This, also, will have a tendency to keep the notes from circulating to a marked extent outside of the section in which they have been issued.

Again, the government may protect the noteholder by giving him a *prior lien* on the assets of the issuing bank in case of the failure of that institution. If, then, the bank should fail, all noteholders must be paid off in full before any payment can be made to depositors or other creditors. In almost all cases, the liquidated assets of an insolvent bank will be sufficient to pay the noteholders in full, even though they may fail to be adequate to pay both noteholders and depositors 100 cents on the dollar. If, in addition, the law provides that *interest* shall be paid on the notes of failed banks from the time of failure until settlement has been made, other banks will willingly accept these notes at par as an investment, and the noteholders will thus be allowed to recover the face amount of their notes immediately instead of being forced to wait throughout the entire period of liquidation, which may be rather prolonged.

The noteholder may be given added protection by provision for the maintenance of a *safety fund* from which the notes of failed banks may be redeemed. In the operation of such a system each bank contributes to the fund on some stipulated basis—usually the amount of notes which it has in circulation. Since it is highly improbable that any large proportion of the issuing banks will fail at any one time in a well-regulated banking system, the contribution of each bank to the fund need not be large, 5 per cent of the notes in circulation being ample for all practical purposes. The control of the fund is ordinarily in the hands of a government department which is authorized either to hold the contributions of the issuing banks in lawful money or to invest them in high-class securities. If the latter procedure is followed, holders of the notes of a failed bank will have to await the sale of securities from the fund before they are able to redeem their notes. On the other hand, the banks receive the income from the securities of the fund in proportion to

their contributions, so that it is less costly to them than it would be if the fund were held in the form of lawful money. If noteholders are given a prior lien on the assets of the issuing bank, and if interest is paid on the notes of failed banks from the time of failure until settlement is made to prevent their depreciation, there is no reason why the safety fund should not be invested in high grade, readily marketable securities.

Secured issues.—The regulations which have been considered thus far provide for a greater soundness in the system of note issue generally, but make no provision for specific security to be held against outstanding issues. In many systems of note issue some such specific security is required by law, and, when this is the case, the issues are said to be *secured*. In the past, *government bonds* have been widely used as security for bank notes. Bonds issued by the national government are considered, in most countries, to be the safest kind of investment, so that noteholders are adequately protected when such security is required. In some countries standard money is required or permitted as security for note issues. The Bank of England, for example, is permitted to have notes outstanding which are secured by government bonds, silver coin, and other securities to the extent of £260,000,000, while all notes in excess of this amount are secured by gold. Since the total notes issued by the Issue Department of the Bank at the close of 1931 amounted to £364,200,000,³ it is apparent that about one-third of the notes are secured by gold. The Federal Reserve banks in the United States, although not required to use gold as security for note issues, may do so if they see fit, and at the close of April 1932, \$2,310,453,000 in gold was held against Federal Reserve note issues of \$2,774,204,000.⁴

A third type of bank note security which has found favor in various countries is *commercial paper*. Commercial paper represents the obligations of business men to the bank possessing it. It therefore constitutes part of the issuing bank's

³ *Federal Reserve Bulletin*, May 1932, p. 323. England had departed from the gold standard by the end of 1931, and the fiduciary issue had been increased temporarily to £275,000,000 at that time. It has since been changed numerous times.

⁴ *Ibid.*, p. 293.

assets and can be easily set aside as security for bank note issues if the law so permits or specifies. The ability to use commercial paper as security for note issues is advantageous to the bank, since such paper is an asset which arises out of the bank's normal business operations and is hence readily available. It is also good security, as a rule, for this purpose. In a soundly managed bank, credit will be extended only to such business men as will, in all probability, have the funds to pay off their loans when they come due. And if the business man has the funds available, it is not too much to say that he is certain to pay off his loan to the bank when it matures (providing the bank so wishes), for any other course will ruin his credit standing in the community and his ability to do business there. Commercial paper as security also has an advantage in connection with the elasticity of bank note issues which will receive attention in the following section.

Securities other than government bonds, standard money, and commercial paper might be, and at times have been, permitted as security for bank notes. In fact, almost anything that is fairly readily marketable could be used for this purpose, although some investments are naturally better than others. A sharp distinction must be made in this connection between the security which is retained behind bank notes and the reserve which is required for redemption purposes. Of course, where the security required by law is itself gold, there is no necessity for an additional reserve for redemption purposes. In fact, there is no especial reason for allowing bank note issues at all, unless it be that they are more convenient for circulation purposes than gold coin. Such notes are, practically, a close approach to gold certificates and act as standard money for domestic purposes if given legal tender powers. But the security required by most banking laws is not gold nor standard money, but some sort of right to claim money in the future, or some property right. These things cannot be used to redeem bank notes and hence cannot take the place of a reserve of standard or legal tender government money. The reserve, ordinarily, constitutes but a fraction of the total amount of notes in circulation—that fraction deemed necessary by law or custom to meet all probable

demands for redemption and to maintain confidence in the soundness of the notes—and, while it does form an element of security, that is not its primary purpose. The standard money reserve is kept in order to maintain the convertibility of the bank notes, and hence to insure their acceptability and parity. The security, on the other hand, is for the purpose of insuring the ultimate repayment of the noteholder when an issuing bank fails. The reserve insures the proper circulation of the notes; the security insures the noteholder against the final loss of his capital.

Guaranteed issues.—The noteholder receives the maximum of protection when the government *guarantees* the immediate payment in standard money of the notes of failed banks. Even where this plan is in operation, the issuing banks may be required to keep bonds, or other assets, behind their notes as security. It should be noted that, when this is done, the security to the individual noteholder is the guarantee of the government. Such collateral as is retained by the banks behind their note issues is for the protection of the government and not the individual noteholder. The bank notes issued in the United States are all direct obligations of the national government, and hence come under the head of guaranteed issues.

Although the various methods of protecting the noteholder have been presented above as separate and distinct methods, it should be understood that, in practice, a wide variety of combinations of these different procedures is to be encountered. In a particular system, the note issue privilege may be confined to a given bank, or a department of that bank, and, at the same time, specific security may be required to be kept behind the note issues. Or the notes, while secured by specific assets, may also carry a prior lien on all the other assets of the bank as well, in case of failure. Again, note issues may be restricted as to amount and territory of circulation, yet be subject to the added requirement of maintaining specific security behind the notes. In short, a considerable number of combinations is possible, and in no important banking system is the regulation of note issues confined to any one of the methods suggested in the preceding paragraphs.

ELASTICITY

Why elasticity is important. — The third requisite of a satisfactory system of note issue is elasticity. To be properly elastic, note issues must expand and contract in accordance with the needs of business. If gold coin is the standard money of the system, the amount of such money available to a given country at any time is more or less rigidly limited. To increase the stock of standard money it is ordinarily necessary to increase the country's stock of gold, and gold is expensive. If it happens that the country's demand for money has permanently increased, it may be entirely worth while to sacrifice the amount of economic goods and services necessary to obtain an additional stock of gold, but, in most countries, there are periodical or seasonal demands for money which are temporary in nature and do not indicate a permanently increased need for standard money. To tie up in gold enough of the nation's wealth to satisfy the monetary demands of the peak seasons would be uneconomical, since it would result in a superfluity of unproductive wealth in the form of gold during the seasons or periods of slack business. It is the function of a proper system of bank note issue to care for the periods in which additional hand-to-hand money is needed in circulation without the expense and trouble requisite to obtaining an additional supply of gold for the purpose, and without too great a disruption of conditions in the money and commodity markets. The ability to circulate bank notes on the basis of a comparatively small reserve of standard money makes this procedure possible in certain circumstances.

Expansibility. — Elasticity, as already observed, is composed of two elements—expansibility and contractibility. Regarding the former, it may be stated that the cause for the expansion of bank note issues is, initially, an increasing demand for hand-to-hand money on the part of the banks' customers. Under an unregulated or free credit issue system, the banks would simply continue to issue and pay out their notes as long as the demand for them continued to evidence itself, or, if the increased demand were very great, note issues would be expanded to the limit set by the standard

money reserves which the banks were required or accustomed to maintain. Regulations designed primarily to insure security, however, may interfere with the ability of the banks to meet all of the legitimate demands of their customers for additional notes. If, for example, issuing banks are required to keep 100 per cent or more in a specific type of government bond behind their note issues, the value of notes which may be issued is obviously limited by the amount of such bonds which is available as collateral. If the amount of the available bonds is small, a satisfactory degree of expansibility is impossible. Again, the total amount of notes which can be issued and put into circulation may be directly limited by law primarily with a view to the protection of the noteholder, yet such a limitation will also interfere with proper expansibility if placed at too low a figure. Finally, a note issue system such as that which existed in England, where 100 per cent in gold had to be placed behind new or additional note issues, absolutely precluded the possibility of any expansion apart from that which could be obtained by an increase in the stock of standard money and bullion itself.⁵

We have seen that the expansion of bank note issues will naturally result from the increased demands of the banks' customers unless unnecessarily high reserve requirements or legal regulations, designed primarily to promote greater security, interfere with this procedure. Granting reasonable reserve requirements, the only problem which presents itself in connection with the expansion of bank notes is that of attaining a desirable and effective security which will not unduly hinder a proper increase in note issues. Once the proper security has been decided upon, the expansion of note issues will take care of itself. One advantage of commercial paper as security for bank notes now becomes clear. This advantage results from the fact that commercial paper, while serving satisfactorily as security, also permits adequate expansibility. This is bound to result from the circumstances under which commercial paper comes into existence. As the seasonal activity in any line of business increases, business

⁵ Under the British Currency and Bank Notes Act, 1928, the Treasury was authorized to allow an increase in the amount of the fiduciary issue, if deemed necessary, for a maximum period of two years. This gave some degree of emergency expansibility to Bank of England notes.

men in this line find it necessary to procure more funds and so borrow more from the banks, giving promissory notes or acceptances as evidence of their indebtedness. With the increase in business, they need a larger amount of hand-to-hand money, and the banks meet this need by paying out to the borrowers in bank notes such of the proceeds of their loans as they desire in this form. The notes and acceptances of the borrowers constitute the necessary collateral security for the bank notes which are paid out, so that the very forces which bring about the increased need for notes provide a supply of the required security.

Contractibility. — But proper expansibility is only half the story. In addition, it is essential that note issues shall contract when the need for them has passed, and it is in this connection that a second advantage of commercial paper as security for bank notes appears, for when the need for the notes is over, the liquidation of the commercial paper by the banks' customers will result in the contraction of the outstanding notes. The issues of notes which bring about an expansion are paid out by the banks almost entirely as a result of loans to business men. When the temporary need for these notes has passed, they will tend to accumulate in the tills of merchants and dealers who, needing them no longer in the conduct of their business, will deposit them in the banks for credit and use the credit obtained to liquidate their loans. Thus the return flow of notes into the banks is practically automatic, and, if there were but one great bank serving the entire country, no legal regulations designed to secure contraction of note issues would be necessary, for all the notes deposited by the business community would necessarily be the notes of that bank and would be retired as they were received. Where there are many banks in the community, however, the notes of one institution may easily be deposited in another, and, in such cases, some regulatory devices are desirable to prevent any given bank from holding the notes of another or forcing them out into circulation instead of sending them home for redemption. The devices which have been employed for this purpose in various countries are simple. First, no bank is allowed to count the notes of another bank as part of its legal reserve against deposits, and, second, no

bank is allowed to pay out over its counter to customers the notes of any other issuing bank. Under these regulations, a bank receiving the notes of another bank on deposit, or in payment of loans, would unquestionably send them home for redemption, since the notes could neither be counted as reserve nor paid out to customers at a later date. In such circumstances, convenient redemption agencies should be established, so that sending the notes home for redemption is made as easy and inexpensive as possible.

In the case of the notes of a central bank, there must be some incentive to the individual banks to send the notes back to the central bank if the note issues of the latter institution are to contract properly. If the individual banks are in the habit of borrowing from the central bank, they will usually obtain that bank's notes in the first instance as proceeds from loans which they have obtained from the central institution. If so, the interest or discount which has to be paid to the central bank on such loans will be an expense to the individual banks which they would like to be rid of and will cause them to send any surplus notes which may have come into their possession in to the central institution for the purpose of reducing their indebtedness there and thereby decreasing their expenses in the way of interest charges. If, at the same time, the individual banks are not allowed to count central bank notes as part of their required reserves, and if the central institution pays the cost of sending the notes in for redemption, the individual banks will have a still stronger motive for redeeming such excess notes as they may accumulate ; for if they used the notes to make payments to anyone other than the central bank, they would have to stand the expense of transporting the notes, and they would not care to keep the notes in their own vaults if not allowed to count them as part of their legal reserves.

Emergency elasticity.—Before bringing this discussion to a close, perhaps a word should be included with respect to emergency elasticity. If commercial paper is permitted as security for note issues, no special regulations permitting an expansion of notes sufficient to meet the emergency are necessary so far as the nature of the security is concerned.⁶ If,

⁶ This statement, while generally true, needs some qualification. A loss of con-

however, a fairly high reserve is required by law to be kept against ordinary note issues, it may be desirable to provide for a relaxation of the legal reserve requirements for emergency purposes, with provision for the payment of a fine by any issuing bank whose reserve falls below the required minimum. When gold coin, or limited issues of government bonds, constitute the normally required bank note security, any effective degree of emergency expansion will necessitate the relaxation of the security requirements of the ordinary law, and a fine or tax may then be imposed on all notes secured by other than the regularly specified collateral.

The fine or tax mentioned in both of these cases is levied as an incentive to the issuing banks to make them retire their emergency issues rapidly as soon as the crisis is over. At a time of crisis, the banks of the system are more concerned with their own solvency than with the making of profits and are willing to pay a fairly heavy tax on excess note issues in order to prevent undesirable consequences both to themselves and their customers. Such times, however, are abnormal. In ordinary times the banks will not issue excessive amounts of notes because of the tax. If a serious situation arises, they may resort to the issuance of emergency notes to tide over the difficulty, but the tax will make it to their own interests to contract these issues as rapidly as practicable. •

Conclusion. — In closing this discussion of systems of note issue, it should be observed that the three requisites of a desirable system of issue — parity, security, and elasticity — are more or less interdependent. It is therefore impossible to formulate regulations concerning any one requisite without taking into account the other two. It follows that the most satisfactory system of note issue is that one which so combines regulations pertaining to these three requirements as to bring about the most satisfactory results possible with respect to all three.

fidence in the banks sufficient to cause heavy withdrawals of deposits for purposes of hoarding, if it occurs during a period of intense depression, may find the banks without sufficient commercial paper to put up as security for bank note issues. A practical example of such a situation was to be found in the United States in the closing months of 1931 and early 1932.

REFERENCES

- Conant, C. A. *A History of Modern Banks of Issue.*
Dunbar, C. A. *The Theory and History of Banking.*
Phillips, C. A. *Readings in Money and Banking.*
Taylor, F. M. *Some Chapters on Money*, Chapter VIII.
White, H. *Money and Banking*, Chapter XVI.
Wright, I. *Readings in Money, Credit and Banking Principles*, Part V.
Willis, H. P. and Beckhart, B. H. *Foreign Banking Systems.*

CHAPTER XII

COMMERCIAL BANK DEPOSITS— THE CHECK CURRENCY

The use of checks as means of payment. — In introducing the subject of bank notes in the preceding chapter, it was mentioned that, in England, Canada and the United States, checks form an even more important means of payment than bank notes. Further, although little use has been made of checks in the past in the continental European countries, there seems to be a tendency at present to encourage the use of checks by the people of those nations. Whatever developments may occur in this respect in other countries, however, is not particularly important from our standpoint as we are particularly concerned with the situation in the United States. There is probably no country in the world in which the ordinary bank check is used as a means of payment—at least by individuals—to the extent that it is so used in this country.

In his report to the National Monetary Commission, Dr. David Kinley estimated that approximately 85 per cent of all money payments in the United States were made by means of checks.¹ Professor Fisher places the figure as high as 90 per cent.² In a more recent comment on the reliability of these estimates, Mr. Carl Snyder of the Federal Reserve Bank of New York made the following statement :³

This [90 per cent] seems at first sight a very high proportion, but even if all retail purchases and wage payments were in cash these would not represent above one-eighth of the total money transactions of the nation. Of course, there are other cash transactions, but, as compared with the astounding volume of check transactions, these are almost negligible.

We have made an estimate from the available figures that the total

¹ *The Use of Credit Instruments in Payments in the United States*, Report of the National Monetary Commission (Washington 1910).

² *The Purchasing Power of Money* (New York 1911), p. 118.

³ *The Review of Economic Statistics*, February 1928, pp. 40-41.

of all checks drawn on all the banks of the country was in 1927 over 750 billions of dollars. The actual volume of checks reported in 1926 was 606 billion dollars ; and this as nearly as can be estimated, is something like 87 per cent of all checks debited to final account. . .

The total of currency in actual circulation outside the banks is now probably less than $3\frac{1}{2}$ billions of dollars (the figures published by the Treasury do not allow for losses by fire, burial and the like, and include, as well, a hypothetical 300 millions or so of gold which quite certainly is not in "circulation").

The estimated total of active demand deposits subject to check is around 25 billions of dollars, or over seven times the estimated amount of money in circulation. The "velocity" or average rate of turnover of the whole volume of these active deposits can only be approximated, but we have made estimates in the Reports Department of the Federal Reserve Bank of New York, that this average probably ranges from 25 to 30 times per year, with an estimate for 1927 of about 30 times. No kind of estimate is available for the actual rate of turnover of currency in circulation, but it seems doubtful if the whole of it turns over as fast as the average of demand deposits.

In view of these computations, it would seem that the estimate that cash transactions do not much exceed one-eighth of the total money transactions of the country is well grounded. Further, a variety of considerations would suggest that this ratio does not change greatly from year to year, save that the proportion of check transactions grows slightly greater.

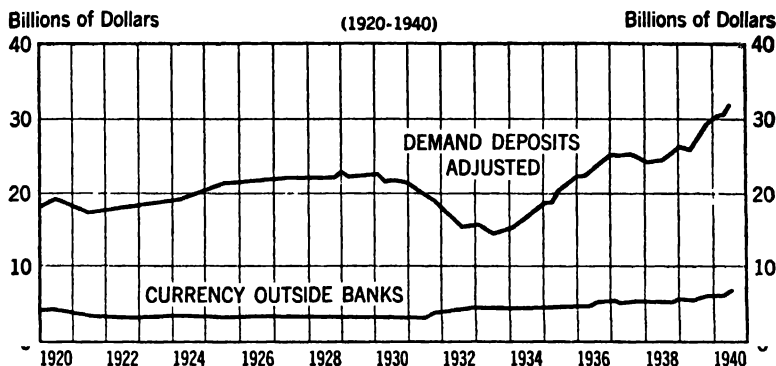
In the light of all the evidence, both past and present, it is clear that the check currency constitutes an element of outstanding importance in our monetary system.

Volume of check currency.— Another indication of the importance of commercial bank deposits subject to check (the check currency) is depicted in the following chart, which shows "demand deposits adjusted" for all member banks of the Federal Reserve system⁴ and money in circulation (all hand-to-hand money outside the Reserve banks and Treasury). There are, of course, demand deposits subject to check in non-member banks, while the cash reserves of non-member banks and vault cash of member banks are included in money in circulation. Nevertheless, the chart indicates the large importance of the check currency as a means of payment in this country.

⁴ These are demand deposits other than interbank and U. S. deposits less cash items reported in process of collection, and prior to 1933, cash items on hand but not in process of collection. *Fed. Res. Bull.*, Jan. 1941, p. 43. This series, while not entirely satisfactory for our purposes, is a close approximation to the volume of check currency in the U. S.

CHART II

CURRENCY OUTSIDE BANKS AND DEMAND DEPOSITS ADJUSTED



Credit money and the check currency. — In the definition of credit money in an earlier chapter (Chapter II), it was stated that credit money is “any sort of instrument which is widely used as a medium of exchange and which, when so used, permits an economy in the need for full-bodied money or bullion.” There is no doubt that bank notes accord with this definition, for their use permits an economy in the need for the standard of value and they pass freely from hand to hand as a medium of exchange.⁵

With checks, however, the situation is somewhat different. Checks are individual credit instruments. Various individuals in the business world have temporary surplus funds which they deposit with the commercial banks, partially for purposes of safe-keeping, but in larger measure for convenience in making payments, since they may draw orders on the bank requiring it to pay to a party designated on the order a definite amount of lawful money on demand. This is possible because the deposit itself is simply a right to receive lawful money on demand from the bank, so that the depositor has the right to order the bank to pay any portion or all of that deposit to a designated party (or his order) without previous notice. These orders are the checks which constitute what we have designated the check currency.

⁵ A medium of exchange, it will be recalled, was defined as a go-between which, having been accepted in exchange for goods or services, is, after a longer or shorter period, given in exchange for other goods or services.

Such checks, though serving as a means of payment, do not, as a rule, act as media of exchange for a number of reasons. (1) A bank is obligated to pay a check only if the person who wrote it (the drawer) has a sufficient deposit with the bank to cover the amount of the check. The goodness of the check, therefore, depends upon the ability of the individual drawer to write it as well as upon the ability and the willingness of the bank to pay legitimate claims to lawful money. Smith may be willing to accept a check from Brown, whom he knows, but Jones, who does not know Brown, will probably hesitate to accept the latter's check if it is offered to him by Smith. (2) Checks are usually drawn for the amount of a specific payment, so that they are likely to be inconvenient for use in making further payments. (3) Lastly, checks are made payable to the order of a specific party, as a rule, so that they cannot be transferred to some other party without indorsement, which creates a liability against the indorser.

Because of the characteristics mentioned, the great majority of checks change hands only once, and so they cannot be said to act as media of exchange in any general sense. Checks, however, are merely evidences of rights to claim lawful money on demand. If it can be shown that these rights which the checks represent do pass from one person to another in exchange for goods and services and, in so doing, act as a substitute for lawful money, there is no reason for feeling that the inclusion of the check currency under the head of credit money is inconsistent, in a fundamental sense, with the definition of credit money given in the second chapter. It is of small moment whether a given check acts as a medium of exchange or not, provided that the right which it evidences serves in that capacity. But do these rights serve in this capacity in accordance with our definition of a medium of exchange?

Checks in an isolated community with one bank. — In attempting to answer this question, let us assume the simplest possible conditions at first, namely, an isolated community having no trade relations with outsiders and having but one large bank with branches which carries on all the commercial banking business of the community. The business men of

the community will then all maintain their temporary surpluses in the form of deposits with this one bank. One man in the community, whom we shall call *A*, owes certain sums to *B*, *C*, and *D*, so he draws orders against his account in the bank authorizing that institution to pay to *B*, *C*, and *D* the amounts designated on the respective orders or checks, and *A* then sends these checks to the men in question in payment of his debts. Will *B*, *C*, and *D* take these checks to the bank and demand lawful money? In all probability, they will not. Instead, they will simply deposit the checks at the bank for credit to their respective accounts. The bank, in the latter case, will then decrease (or debit) the account of *A* by the aggregate amount of the three checks and increase (or credit) the accounts of *B*, *C*, and *D*, respectively, by the proper amounts. The latter men now find their rights to claim lawful money (their deposit accounts) increased by the amount of the deposited checks. Prior to this time, let us suppose, their accounts had been uncomfortably small, but now that they have been augmented by the amount of *A*'s checks, the three business men in question are able to draw their own orders against their revived accounts at the bank and use the checks so drawn in the payment of their own debts. The recipients of these checks will, in turn, deposit them at the bank and receive credits to their accounts, while the accounts of *B*, *C*, and *D* will again be drawn down by the amount of the checks they have written and sent to their creditors to make payments that were due.

In the transactions just indicated, *B*, *C*, and *D* received from *A* in payment for goods or services, not lawful money, but rights to claim such money from the bank. They used, in turn, not lawful money, but these same rights to make payments for goods or services which they had received. Deposits at the bank were thus used as media of exchange. Such transactions are typical of approximately nine-tenths of the payments which actually occur in this country today under somewhat more complicated conditions than those we have postulated. But, before bringing our hypothetical example a step nearer to actual conditions, we must stop to inquire why any other money than bank checks should be used at all.

In the example chosen, we assumed that *B*, *C*, and *D* did not present their checks (which they had received from *A*) at the bank to be cashed or exchanged for lawful money, and that assumption is largely in accord with actual conditions, although perhaps not entirely so. Possibly *B* is the employer of laborers who object to taking checks in payment for their labor services and want hand-to-hand money. Many of the laborers probably do not have deposit accounts at the bank, so that *B* finds it advisable to exchange his check, or a part of it, for hand-to-hand money, and use the latter to pay his laborers' wages. If the bank, in our imaginary example, issues notes, *B*'s demand for hand-to-hand money may be met by giving him bank notes in exchange for his check; otherwise, he will receive lawful money. In the former case, the bank merely substitutes one form of demand obligation for another; but whether *B* receives bank notes or lawful money is of no importance in the present connection. In either case, the fact remains that, to the extent that the bank paid out hand-to-hand money to *B* when he presented *A*'s check, the check (or deposit represented by the check) was not being used as a medium of exchange, for the second part of the exchange transaction (exchanging the deposit for goods) was never completed. As long as some payments continue to be made in media other than checks against deposit accounts, the latter can never entirely usurp the place of other forms of money; and it may be safely asserted that the time will never arrive when, even in entirely domestic transactions, everyone will find it more convenient to use checks than hand-to-hand money for every payment.

Checks in an isolated community with several banks. —

We shall now return to our isolated community and study it under slightly more complicated conditions. Assume that an additional bank has been established in the community. Now, when *A* draws checks against his deposit account in favor of *B*, *C*, and *D*, suppose that *B* and *C* deposit their checks, not in *A*'s bank, but in the other banking house which has been established. The latter bank will then have some claims against the former. *B* and *C*, however, and other depositors of the new bank will, in all probability, have writ-

ten checks against their accounts and paid them to depositors of the old bank where they will be deposited, so that this institution will also have received claims against its new competitor. At the end of the day's business the original bank will have accumulated, say, \$47,000 in claims against the second bank, while the second bank has, we shall suppose, a total of \$50,000 in claims (checks) against the first institution. Obviously, it would be foolish for each bank to pay to the other the total amount of claims against it in lawful money. Instead, the two banks will cancel their claims against each other so far as possible and pay only the difference in cash. In this case, the original bank would have to pay the newer institution the balance of \$3000 in favor of the latter, but the other \$47,000 of conflicting claims would be canceled. In so far as this cancellation process takes place, deposit credits actually take the place of other forms of money and so act as a medium of exchange.

If more banks are introduced into our hypothetical community, essentially the same process of check cancellation will be resorted to. This is what is known as the *clearing process*. At a designated time, each bank in the community will send its agent to a common meeting place, known as the clearing house, with all the claims that it has against each other bank in the community. At the clearing, each bank sets the sum of the claims that it has against all the other banks of the community over against the sum of the claims which all the other banks have against it, and the difference, if any, is paid or received in cash. That is, when a bank has more claims against it than it has against the other banks, it pays the difference to the manager of the clearing house. The manager then uses the cash so paid to him to meet the claims of those banks which had a favorable balance, i.e., those banks which had more claims against all the others than the others had against them. Since the process is reciprocal, the payments of cash into the clearing house by the banks with adverse balances are bound to be just sufficient, in the aggregate, to meet the claims of the banks with favorable balances. No cash will remain with the clearing house manager at the end of the clearing process, for all that he has received from some of the banks has been paid out, in turn,

to others. In fact, unless this is actually the case, some error has been made in adding and checking the sum of the items due to and due from the different banks that have participated in the clearing.

An example will serve to make this description somewhat clearer. Assume four banks, *A*, *B*, *C*, and *D*, with checks at the clearing house as follows :

Against	Bank <i>A</i>	Bank <i>B</i>	Bank <i>C</i>	Bank <i>D</i>	Total
Bank <i>A</i>		\$40,000	\$ 5,000	\$20,000	\$65,000
Bank <i>B</i>	\$30,000		15,000	23,000	68,000
Bank <i>C</i>	17,000	10,000		35,000	62,000
Bank <i>D</i>	23,000	20,000	37,000		80,000
Total	\$70,000	\$70,000	\$57,000	\$78,000	\$275,000
Bank <i>A</i> is owed			\$5,000		
Bank <i>B</i> is owed			2,000		
Bank <i>C</i> owes				\$5,000	
Bank <i>D</i> owes				2,000	
			\$7,000	\$7,000	

From the foregoing tabulation it will be seen that the amounts due to the clearing house by banks *C* and *D* just equal the amounts due from the clearing house to banks *A* and *B*. Further, it shows that, out of a total of checks amounting to \$275,000, only \$7000 in cash, or 2.54 per cent, was necessary to settle the balances which did not cancel. The remaining \$268,000 in checks acted as a substitute for lawful money in the payments in which they were used.

Checks in several communities with numerous banks. —

Now let us expand the territory in our example to include a number of communities, each with a number of banks. We shall also assume a central or bankers' bank to be in operation in this territory. The relations between individual banks and a central institution are practically identical with the relations established between business men and their banks. Just as business men keep a large share of their ready cash reserves in the form of deposits with their banks, so the latter institutions keep a large portion of their reserves on deposit with the central bank. In our enlarged system, therefore, each individual bank will have a demand deposit with the central bank which constitutes a substantial part of its reserve against its own deposits.

With the larger number of communities now included in our example, considerable numbers of checks received on deposit by the various banks will be drawn on banks located outside the community, and so will not be collectible through the local clearing house in the manner already described. Because of the presence of the central bank, however, the process of collecting such checks is extremely simple. The out-of-town checks are first sent to the central bank. That institution, upon receiving them, debits the reserve deposit accounts of the banks on which they are drawn by the proper amounts and credits the reserve accounts of the banks sending in the checks by similar amounts. The central bank thus acts as a clearing house for all the banks of the territory which it serves, for, at the end of each day, each bank will have had its reserve account credited by the sum of all the checks it had held on other banks in the region, and debited by the sum of all the checks the other banks of the region had held against it, the result being a net debit or credit to its reserve account, as the case may be. No cash will have been paid out, the whole process having been carried through by making the appropriate debits and credits on the books of the central bank. It is also probable that balances at the local clearing houses will no longer be paid in cash, but with checks drawn against the paying banks' accounts in the central institution. Referring to the example given in the previous section (p. 266), banks *C* and *D* will draw checks against their accounts at the central bank to pay their adverse balances. At the central bank, the accounts of *C* and *D* will be debited by the proper amounts (\$5000 and \$2000 respectively), while the accounts of *A* and *B* will be credited. When this situation exists, the whole check-using process is reduced to a simple form for the entire banking system, which is comparable with that existing in our original example of a single community with a single bank. A few more book entries are necessitated, it is true, but the result is the same, and once more, under the complicated conditions of actually existing banking systems, the bulk of the checks cancel one another, rights to claim lawful money rather than lawful money itself act as the chief type of medium of exchange, and only the demands of the community for lawful money as such have

to be met out of the banking reserve of the country.⁶

Why stop at checks? — Although, in a strictly commercial banking system, the great bulk of the deposits of the banks would be subject to check, and would hence come under the head of check currency, as a matter of practice the so-called commercial banks also accept deposits subject to notice of withdrawal against which checks may not be drawn, even though the notice requirement is frequently waived. The question arises as to whether or not these deposits should be included under the head of money as well as the check currency. They should not for the reason that they do not serve as a medium of exchange. In order to utilize such deposits in making payments, it is necessary to withdraw them in the form of lawful money or bank notes, or to transfer them to checking accounts where they become a part of the check currency.

The use of check currency, through cancellation of claims at the clearing house, does not merely postpone the use of hand-to-hand money, but obviates its use to a large extent. In the case of deposits not subject to check, as well as in the case of charge accounts, commercial credit instruments such as time promissory notes and acceptances, and longer term instruments such as bonds and mortgages, payment in some form of medium of exchange is postponed, but not eliminated. Consequently, we shall not include these types of instrument under the head of money.

Desirable characteristics of the check currency. — In order to serve satisfactorily as a medium of exchange, the check currency should possess, in as large a measure as possible, the three characteristics — parity, security and elasticity — which are essential to a good system of bank note issues. It will be worth while to consider briefly the manner in which the attainment of these characteristics may be assured.

⁶ These demands may be for full-bodied money for purposes of export or for use in the arts, legal tender money for tax payments, money for the payment of wages to laborers who are unwilling to accept checks, or hand-to-hand money for use as pocket money. If bank notes are valid tender for tax payments, all but the first of these demands may be met with bank notes rather than lawful money; but, in any case, checks may be said to serve as money until converted into some form of hand-to-hand money rather than being transferred to another deposit account. Lawful money, as the term has been interpreted in the United States, means legal tender money permissible for use as bank reserves. In the past, this has been confined to government money in this country.

Parity.—In order to maintain the check currency at par with the standard money unit, it is necessary that the banks maintain adequate reserves for redemption purposes and that checks drawn on one bank and deposited in another shall be collectible at par from the drawee bank. We shall deal with the problems of reserves and the collection of checks in some detail at later points. It is sufficient here merely to note that, because of the substantial cancellation of conflicting claims in the form of checks through the clearing process, the reserves which the banks find it necessary to maintain are not large. If there is in operation an efficient collection and clearing system, any bank will be willing to accept checks drawn on other banks of the system at their face value. Because some time may elapse before a check on a distant bank can be collected, however, it is not improper for the bank receiving such a check on deposit to charge the depositor a small fee covering the loss of interest during the period of collection. A perfectly definite and reasonable charge of this sort does not detract from the efficient use of the check currency on a nationwide scale, although the elimination of such charges would be desirable from the currency standpoint.

Security.—For reasons noted in the preceding chapter, it has not been customary in the check-using countries to devise means for protecting the depositor in the same way that the noteholder has been protected. Some states in this country have, in the past, enacted and later repealed deposit guarantee laws. More recently the Federal government has established a comprehensive system of deposit insurance for the protection of bank depositors. Such arrangements are similar in nature to the safety fund mechanism for the protection of noteholders and depend, for their sound operation, on following certain definite principles in regard to the size of the fund, supervision of the contributing banks to insure their sound operation, etc.

In general, no specific security is required to be held against checking deposits. In the United States, the Federal government requires its deposits in the commercial banks to be secured by government or other acceptable securities, but for the great bulk of checking deposits the banker is free to

choose his own security. In other words, the check currency is an asset-secured currency. The banker maintains certain reserves against his deposits, the remainder being loaned or invested in any manner compatible with the law. It is these loans and investments—the major assets of the banks—which form the security for the banks' deposits. It follows, therefore, that the security behind the check currency is good or bad depending upon whether the banks' loans or investments are good or bad. Sound bank operation is accordingly the best insurance of security for bank depositors.

Elasticity.—Elasticity of the check currency, as of bank note issues, is limited by the size of the reserves maintained against checking deposits and the type of security behind them. Since the reserves of the commercial banks are usually small, they offer no great obstacle to expansibility. Moreover, as no specific security is required to be held against the great bulk of checking accounts, there would seem to be no hindrance on this score to expansibility.

It must be remembered, however, that proper elasticity calls for ready contractibility as well as for expansibility. For this reason, commercial paper constitutes the most desirable asset for commercial banks to hold against checking deposits. This paper, consisting as it does of relatively short-term promissory notes or acceptances of business men who have borrowed at the bank to assist in the production or distribution of goods, increases as the amount of goods produced and marketed increases. If, on the other hand, the flow of goods to market falls off, business men repay their loans at the bank by drawing checks in favor of the bank against their accounts. Both loans and checking deposits are thus decreased and the check currency contracts in amount.

In this manner, if the commercial banks confine their loans to business enterprises which wish funds to assist in producing and marketing goods, the check currency will expand and contract with the flow of goods to market and will hence have a high degree of elasticity. That such elasticity is essential to the proper functioning of the monetary system will be shown later on when we come to deal with the principles governing the value of money and the control of credit.

Conclusion. — In this and the preceding chapter, the two chief types of commercial bank liabilities and their significance in the monetary system have been considered in some detail. In the two chapters which follow it will be necessary to turn our attention to the major commercial bank assets and deal with some of the problems which confront the banker in connection with the maintenance of reserves and the extension of credit to customers.

CHAPTER XIII

PRIMARY AND SECONDARY RESERVES

Introduction.—For many years it has been the practice in the United States to require by law the maintenance of minimum reserves against deposits by the banks. In most foreign countries, on the other hand, the size of the reserves maintained has been left to the discretion of the bankers who have governed their actions in this regard both by custom and tradition and their own conclusions as to what portion of their assets should be held in the form of reserves. In the following discussion we shall, for the most part, be concerned with the factors which should govern the size of reserves quite apart from any legal requirements since laws on the subject are apt to be arbitrary to a considerable extent.

PRIMARY RESERVES

The theory of reserves.—Theoretically, reserves against deposits are conceived of as funds of cash or its equivalent which have the purpose of meeting the demands of depositors who wish to withdraw their deposits. From the point of view of the individual banker, then, a reserve is a fund designed to insure his solvency, and, unless otherwise restricted by law in the matter, the banker will keep that amount which custom, experience, and wisdom have shown to be necessary for the purpose.

What constitutes the amount necessary to be held as reserve depends upon a number of factors. In the first place, the number of depositors is important. If a bank had only one depositor, who might withdraw his entire deposit on demand, it is obvious that no smaller reserve than 100 per cent of the deposit would be adequate to insure the solvency of the bank. As the number of depositors increases, however, deposits and withdrawals tend more and more to offset each other, so that a large bank with many thousands of

depositors needs, other things being equal, a smaller proportional reserve than does the small bank with but few depositors.

A second factor affecting the size of the reserve to be held against deposits is the nature of the business of the bank's customers. If the latter are chiefly engaged in one particular line of trade, and if that line of trade is subjected to marked seasonal influences, then there will be times of the year when the withdrawals greatly exceed the deposits, and the bank will have to keep a reserve on hand at such times to meet the seasonal requirements of its customers. Generally speaking, then, the greater the diversity of business of a bank's customers, the smaller the proportional reserve it is necessary to maintain, as the seasonal demands of its various customers will be spread throughout the year, the deposits of some business enterprises tending to offset the withdrawals of others. This illustrates one advantage of a system of branch banks over a unit banking system. The customers of a large bank with widely scattered branches will almost certainly be engaged in a wide variety of occupations, so that a heavy demand for funds by customers in a given region may be met by the transfer of funds from some other section where the demand is slack.

Thirdly, the type of deposit plays an important part in determining the size of the reserve to be held against it. It should be clear that a smaller reserve may safely be maintained against savings or time deposits than is necessary against demand deposits. The former, being for the most part accumulated by individuals with the idea of permanent investment in mind, have a comparatively slow turnover and do not require a very large reserve, while the latter are much less stable, so that a higher reserve is necessary.

Fourthly, with respect to reserves against demand deposits, the liquidity of the bank's loans and investments is significant in relation to the size of the reserve which must be held. This question of liquidity will be considered in the following section of this chapter, so that it need only be pointed out here that the more liquid the loans and investments of a bank, the smaller the reserve it will be necessary to maintain against deposits payable on demand.

Fifthly, it should be noted that the regularity of activity of a bank's demand deposits is a determining factor in the size of the reserve to be held. The deposits may be very active, but if withdrawals and deposits are made with a predictable degree of regularity, the banker will not need to keep as high a reserve as when the size and number of withdrawals are highly irregular.

Lastly, the organization of the reserves of a banking system exerts a significant influence on the size of the reserve which may safely be held by the individual banks of the system. If the reserves are in large part deposited in a central reservoir (such as a central bank) under unified control, they may be utilized much more efficiently than if scattered throughout the vaults of the individual banks. The mere pooling of reserves in the central bank has two advantages. First, the reserves may be used where most needed as in a large branch bank system ; and second, through the development of a unified system of check clearing and collection, the cancellation of checks through the clearing process may be carried through for the country as a whole with an attendant diminution of the amount of actual cash reserve necessary for the settlement of clearing balances. When, in addition, the central bank is permitted to extend its own credit on the basis of these deposited reserves, a still greater efficiency in their use is effected.

Proportional reserves.— It should, of course, be realized that when large or small reserves are mentioned, the terms are used in relation to deposits, not in any absolute sense. In other words, it is the reserve ratio (the ratio of reserves to deposits) which is important. The actual number of dollars in the reserve is of no especial significance apart from the amount of deposits against which the reserve is held. When speaking of the size of reserves, therefore, it will be understood that the reserve ratio rather than the actual amount is referred to, unless otherwise specifically stated.

Methods of changing the reserve ratio.— Since the reserve ratio represents a certain proportion of deposits, it is clear that it can be altered by a change either in the amount of the reserve or in the amount of deposits. If, then, the reserve ratio of a given bank is deemed to be too low, it can

be raised through increasing the bank's reserve cash or balances or through decreasing its deposits. There are several ways in which one or both of these changes may be effected.

First, an increase in the bank's cash deposits will increase the ratio. It is true that this increases the deposits, but it also increases the reserve by a like amount, and since the reserve constitutes but a fractional part of the deposits, an increase in the latter will increase the reserve more than proportionally. Second, the reserve ratio may be raised by a contraction of loans on the part of the bank. As outstanding loans mature and are paid, either the bank's cash will be increased — as when the loans are repaid in cash or in checks on other banks — or its deposits will be decreased — as is the case when the borrower draws a check against his own account in the bank to repay his loan. Third, the reserve ratio may be increased by the sale of investments for cash or reserve funds by the bank. Lastly, it may be possible to build up the ratio by borrowing from another bank.

It need only be stated that the reserve ratio may be lowered when too high by the reverse of any of the preceding methods. The withdrawal of deposits, the expansion of loans, the purchase of investments, or the repayment of a loan to another bank will serve, singly or in combination, to reduce an overly large reserve to the desired proportion of deposits.

Not all of the methods mentioned, whereby the reserve ratio may be altered, are in the direct control of the banker. He is not able either to acquire cash deposits or to prevent withdrawals at will. Theoretically it should be possible for him to contract his loans whenever necessary or desirable. As a practical matter, however, it is often inexpedient for the banker to contract loans at the time when his reserve most needs to be replenished. The expansion of loans, on the other hand, depends entirely upon the demand of the bank's customers for credit, not on the desire of the banker in the matter.

We may conclude, therefore, that the conscious control of the reserve ratio can be effected by the individual banker chiefly through the sale and purchase of investments or through the borrowing of reserve funds from some other

bank and by the repayment of such loans. Where the individual banks are in a position to obtain loans from the central bank at practically any time, as in the United States, the latter method is likely to be the one most frequently resorted to in adjusting the reserve position. Nevertheless, it is not desirable to depend entirely on this method. There are many occasions upon which it is more expedient or more profitable to bring about the desired adjustment by the sale or purchase of open market investments than by borrowing or repaying funds at the reserve banks. Consequently, it is desirable for a bank to deal in the open market to some extent. The investment of funds in open market securities constitutes a way to turn idle excess reserves into earning assets when customers' demand for credit is slack, and, at the same time, to build up a secondary reserve of readily salable investments which may be liquidated when it becomes necessary to increase the bank's primary reserve in time of need.

Primary and secondary reserves.—It has already been noted that one of the factors affecting the size of the reserve which a bank finds it necessary to maintain against its deposits is the liquidity of its loans and investments. So important is that particular group of loans and investments which can be turned into cash at will because of their liquidity or marketability that it is commonly referred to as a secondary reserve. The whole question of secondary reserves will receive attention later in the chapter. For the present, we are concerned with the subject merely because the possession of secondary reserves by a bank gives the banker a measure of direct control over his reserve ratio which would otherwise be lacking.

What constitutes primary reserves.—It may have been inferred from the foregoing discussion that primary reserves consist solely of cash in the possession of the bank. While it is true that cash in vault does constitute a portion of any bank's primary reserve, free balances payable on demand and held on deposit with other banks must also be included under this head. The purpose of a reserve against deposits, which is to pay depositors who wish to withdraw their funds from the bank, may often better be served by means of a balance in another bank than by means of cash held in the bank's own

vaults. A customer who wishes to make a payment in New York, for example, may easily find it more convenient to exchange his deposit for a New York draft than to withdraw it from the bank in cash. The balance in a New York bank, against which the draft is drawn, acts quite as much in the capacity of a primary reserve as does cash in the bank's own vault when used to cash a local check. Again, when banks generally maintain deposits in the central bank, drafts drawn against these balances may be used to remit for checks sent in to it for payment or to pay adverse clearing house balances more conveniently than could cash itself.

In some instances banks receive interest on balances held with other institutions. When this is the case, such balances constitute investments as well as reserves and may be maintained at larger figures than would be held if no income were derived from them. So long, however, as they act as reserves in meeting the claims of depositors, bankers' balances may reasonably be included, along with cash in vault, in the category of primary reserves.

Legal vs. working reserves.—A distinction of significance, especially in the United States, is one between legal and working reserves. Since the middle of the last century the practice of requiring a minimum legal reserve has been generally followed in this country, as a result, doubtless, of our system of widely scattered and often very small unit banks. Obviously, the legal requirement sets a lower limit to the size of the primary reserve which any given bank must keep; but it is frequently desirable, or even essential, that some margin above the legal limit be maintained. Consequently, the actual primary reserve, which may be termed the "working reserve" of the bank, is likely to be somewhat above the legal requirement. In discussing the question of reserves in the United States, emphasis is apt to be placed on the legal requirements rather than on the working reserves of the banks. Fundamentally, of course, the latter are more important than the former as depicting the real reserve situation in the country.

SECONDARY RESERVES

The need for secondary reserves. — In discussing primary reserves it was pointed out that the size of the reserve which a bank should maintain depends in some measure on the maintenance of secondary reserves of liquid investments. To the extent that a bank holds paper or securities that may be turned into cash without undue sacrifice in time of need, it may safely conduct its business with a smaller primary reserve than would otherwise be desirable. Since a primary reserve represents largely idle or non-earning assets, it is clearly to the advantage of the banker to keep it at the lowest figure compatible with safety. A well-selected secondary reserve portfolio is essential to the attainment of this end.

The question of liquidity. — Liquidity is an extremely important concept in the study of commercial banking and, since its importance is greatest in connection with the selection of secondary reserves, it will be advisable to consider various aspects of the subject before proceeding further with a discussion of secondary reserve investments.

Liquidity of a bank asset, as already implied, means the *ability to turn the asset into cash quickly with little or no loss*. Almost any sound asset may be turned into cash without substantial loss if ample time is allowed for the transaction. Likewise, practically any sound asset may be turned into cash quickly if the banker is willing to sacrifice it at whatever price he can obtain. Neither of these alternatives is satisfactory with respect to secondary reserves. The banker wants his cash quickly, but, needless to say, he wishes to obtain full value for the assets which he decides to liquidate.

From the point of view of the individual banker, it is a matter of indifference where the cash he obtains comes from. If he can sell bonds or transfer loans to another bank, such assets rightly seem liquid to him. From the standpoint of the banking system, on the other hand, the transfer of an asset from one bank to another does not represent liquidation, for the system is still carrying the asset, although the bank originally holding it is not. In order to have this distinction clearly in mind, we may say that assets which can be transferred readily from one bank to another have the

characteristic of shiftability, while assets that can be liquidated outside the banking system are really liquid.

Truly liquid assets consist almost exclusively of self-liquidating paper, by which is meant *paper arising out of loans the proceeds of which are used to assist in the production and/or distribution of goods, the sale of the goods furnishing the funds to repay the loan at maturity*. Such loans are in the nature of the case usually of a comparatively short duration. In many branches of distribution a loan of thirty or sixty days is of ample maturity to cover the period required for marketing the goods, while loans to manufacturers for the purpose of aiding in the production of goods do not ordinarily require a maturity of more than from three to six months. In agricultural production, on the other hand, loans of somewhat longer duration are required—running as long as three years in the growing and marketing of live-stock—and it has been deemed desirable to set up a special type of credit institution to take care of the longer needs of certain types of agriculture. With relatively few exceptions, however, loans of a self-liquidating nature are of fairly short maturity.

As an illustration of an asset which possesses shiftability rather than real liquidity, consider the call loan secured by stocks and bonds as granted to brokers on the New York stock market. Such loans mature at the will of the lender (or borrower) and hence have the appearance of great liquidity. Actually they are not really liquid. If one bank calls some of its loans, they will ordinarily be shifted to another bank, but the loans are still carried by the banking system. If all of the New York banks wish to call loans, the shiftability of this type of asset disappears. Theoretically, the bankers can sell the collateral security behind the loans under such conditions, but in practice this results in such a rapid decline in security prices, because of the concerted sales, that the banker would lose heavily by forcing the liquidation of the collateral.

A similar situation exists with regard to bonds. Bonds which are traded in actively on an organized market may be sold for cash at once at current prices. If the bonds are sold to real investors—individuals, savings banks, insurance

companies, etc.—who buy them outright, they are really liquid. If, however, they are purchased by other commercial banks or with funds borrowed from such banks, the burden is merely shifted from the bank disposing of the bonds to other banks in the system.

In either case, the bank selling the bonds may suffer a loss if the market price at the time of sale is less than was paid originally by the bank. In the case of a commercial loan, recovery of the face amount of the loan depends upon its soundness. What will be obtained from the sale of bonds, on the other hand, depends upon the market for the bonds at the time of sale, not upon the soundness of the issue.

If commercial paper is strictly self-liquidating and if the banker is certain of payment on the maturity date without any renewal, it makes an excellent secondary reserve in spite of the fact that a sizeable proportion of the notes or acceptances held may have a maturity of from ninety days to six months. By purchasing paper with a variety of maturity dates so that some paper is maturing each day, the banker is assured of a regular inflow of cash. If he has no immediate need for the additional cash, he may purchase new paper of a similar type. Should it prove necessary to strengthen his cash or reserve position, however, this end may be attained by refraining from replacing maturing paper in his portfolio.

Marketability plus liquidity.—It has been shown that self-liquidating paper may be made to serve satisfactorily as a secondary reserve, provided that the banker can make a proper selection of maturity dates and can be assured that the paper will not have to be renewed. In granting loans, even of the self-liquidating type, to his own customers, the banker is not always in a position to attain these ends. The bulk of his borrowers may need their loans at about the same time, particularly if their business is seasonal, and the banker will have to accommodate them. Moreover, if some of them wish to renew their loans, the banker will feel more or less obligated to accede to their requests. Consequently, when commercial paper is acquired for secondary reserve purposes, it is commonly purchased in the open market.

Open markets for self-liquidating paper in the form of bankers' acceptances exist in the leading financial centers of

the world. They are made up of sellers, buyers, and groups of specialized dealers. The sellers of the paper are of course those who are using the funds for productive purposes, while the buyers are largely banks which invest in this paper for the purpose of building up a liquid secondary reserve. Ordinarily, also, the central bank stands ready to buy this type of paper at a known price, so that there need never be a time when prime acceptances cannot be disposed of by dealers. Markets of this sort are commonly referred to as bill markets, because the acceptances which are dealt in are a form of bill of exchange.

Advantages of a bill market to bankers.—The advantages to the banker of a highly organized bill market are several. In the first place, the dealers make it a business to carry a portfolio of bills with a wide variety of maturity dates. This enables the banker to arrange his holding of bills in a fashion most satisfactory to his needs. If he has heavy demands from his own customers at a particular season of the year, he can buy bills which all mature at the time he will need added funds to meet his customers' demands. Or he can buy bills maturing on a long series of successive dates if this arrangement better suits his needs.

In the second place, there is no question of renewal of bills bought in the open market. They are paid promptly when due, with the result that the banker can be absolutely assured of payment at the exact time that the bills mature.

Lastly, it is customary for dealers to buy back bills before maturity, and sell them elsewhere, in the event that the original purchaser wishes to dispose of them before their due dates. In this way, shiftability is added to the natural liquidity of the bill. Moreover, since the bills are bought and sold on a discount basis—being short-term paper—they are not likely to vary greatly in price. Although the banker may lose a small amount if the discount rate rises between the time he buys a bill and the date on which he sells it, the loss suffered is likely to be less than he would have to take, say, on the sale of bonds.

To illustrate this last point, suppose a banker buys a ninety-day bill for \$10,000 when the discount rate is 5 per cent. The bill will cost him \$9,875. If, at the end of sixty days,

he decides to sell the bill, and if the discount rate at that time has risen to 8 per cent, he will obtain \$9,933.33 for the bill. This means that, for the sixty days during which he held the bill, his return was the difference between \$9,933.33 and \$9,875.00, or \$58.33, which is at the rate of $3\frac{1}{2}$ per cent, instead of the 5 per cent which he would have obtained had he held the bill to maturity. The loss, therefore, is in the way of a reduction in the rate of return on the bill, not in any loss of principal. Moreover, the increase in the discount rate assumed in this example was much greater than would occur in a period of sixty days except in times of great stringency in the money market.

Bank acceptances as secondary reserves.—From the foregoing analysis, it is clear that bank acceptances constitute an excellent secondary reserve investment. They are drawn in the majority of instances to finance a specific sale and shipment of goods and are hence strictly self-liquidating in nature. This characteristic, combined with the added advantages afforded by their marketability, go far to make this type of commercial paper as satisfactory a secondary reserve as is available.

Treasury bills.—Another type of secondary reserve in wide favor with bankers consists of short-term government obligations, usually in the form of Treasury bills, which are dealt in on an organized market in the same fashion as bankers' acceptances. These bills are bought and sold on a discount basis and usually run either ninety or one hundred and eighty days to maturity. They are frequently handled by the same middlemen who act as dealers in acceptances and may hence be considered as part and parcel of the general bill market. They have the double advantage of ready marketability and short maturity. Treasury bills have been especially popular since the Great War, for the increase in the national debt of most countries has brought into being a far larger supply of these bills than was available in the pre-war era.

When Treasury bills are properly issued, they not only have the characteristic of shiftability, being readily marketable before maturity, but are really liquid as well. Bills of this sort should be sold by the Treasury only in anticipation

of assured revenues from taxation, the sale of long-term bonds to investors, or other legitimate sources. When issued for these purposes, the bills are actually paid at maturity from the income of taxpayers or investors and disappear from the assets of the banking system. It is therefore clear that properly issued Treasury bills constitute an unexceptionable secondary reserve investment.

Unfortunately, during the depression there has been a strong tendency to finance increasing government deficits by expanding the short-term debt instead of by the flotation of bonds. Treasury bills or certificates, in such circumstances, lose their real liquidity. They are issued in ever increasing quantities, partly to obtain new cash and partly to take up maturing bills. It would be highly desirable to eliminate this practice and to confine the issue of Treasury bills to their proper purpose, thus making them really liquid short-term obligations.

Secondary reserves in the United States. — In this country the banks have held secondary reserve investments in call loans to brokers, bank acceptances, open market commercial paper, Treasury bills and certificates, and high-grade, marketable bonds. The merits of these various investments for the purpose in question have been considered in the foregoing paragraphs. Later on the organization of the markets in which these investments are traded will be given detailed treatment. At this point we are concerned, not with the technical organization of markets, but with the purpose of secondary reserves and the principles governing their selection.

The question of yield. — It has been noted that the banker may safely maintain smaller primary reserves than would otherwise be compatible with safety if he holds a well-selected portfolio of secondary reserves, and that this is advantageous because he is thus able to turn into earning assets funds which would otherwise be idle. When the banker selects his secondary reserve investments, he is accordingly interested in what they will yield him in the way of earnings. It is important, however, to emphasize the fact that yield should be a secondary consideration. Safety and liquidity must be primary objectives: safety because losses on unsound investments may readily more than offset the yield,

and liquidity because a secondary reserve, by its very nature, must be quickly convertible into cash. For these reasons, acceptances and Treasury bills, properly issued, are better secondary reserves than call loans to brokers or bonds, although the latter may frequently have a higher yield.

Qualifications.—The statement just made needs to be qualified when there is in existence a central bank which will discount for the commercial banks paper secured by bonds or by stock exchange collateral. Under such circumstances, the individual banker is able to shift his burden to the central bank and may hence turn these assets into primary reserves. As will be shown later, however (Chapter XVIII), central banks are generally required to confine their discounting operations to high-grade, self-liquidating paper, or to paper secured by government or quasi-government bonds. Moreover, when bond secured paper is discounted at the central bank, a penalty rate is usually charged. Consequently, the banker may not find this method of obtaining funds a very profitable one.

Conclusion.—The precautions which the banker should take in insuring his ability to meet the immediate demands of his depositors for cash have been discussed in the present chapter. These arrangements are of vital importance, but this must not be allowed to obscure the fact that the banker's chief business is the extension of credit to his customers. The problems that surround this process will be considered in the following chapter.

REFERENCES

- Atkins, P. M. *Bank Secondary Reserves and Investment Policies*. New York. 1930.
Rodkey, R. G. *Legal Reserves in American Banking*. Ann Arbor. 1934.
Federal Reserve Bulletin, November 1938.

CHAPTER XIV

LOANS, DISCOUNTS AND INVESTMENTS

Introduction.—In the description of the nature of banking in Chapter V, it was pointed out that the chief business of a bank is to lend or invest the funds that are deposited with it after setting aside a sufficient reserve to care for probable withdrawals by depositors. We have already considered the question of reserves as well as of those loans and investments which the commercial banks make in the open market. More important than either of these questions is that of loans and discounts granted to the bank's own customers.

The commercial deposits pool.—As a preface to the consideration of the commercial banks' lending activities, it will be advisable to have in mind a clear picture of the part which should be played by the commercial banks in the economic system. This has already been described concisely in an earlier connection (Chapter V), but may well be reviewed and further elucidated here. The resources of any business enterprise are divided into two classes, fixed assets and quick or current assets. The former include such items as real estate, plant, and equipment, which are not themselves offered for sale, but are nevertheless essential factors in the process of manufacturing or distributing goods. The current assets, on the contrary, include inventories, which are destined to be sold, and bills and accounts receivable, and cash or immediate claims to cash. It is the latter item which, for purposes of safety and convenience in making payments, is held as a deposit credit with the bank, the total of such deposited funds constituting what we have termed commercial deposits.

The size of the cash balance (i.e., checking deposit) which any enterprise finds it desirable to keep on hand varies in marked fashion from business to business and from season to season. Some concerns, such as a cash grocery business,

usually have relatively large and fairly steady cash balances, while other enterprises whose business is subject to decided seasonal variations may draw their balances down to a low figure, and find it necessary to borrow as well, at a period of seasonal strain, only to pay off their indebtedness and build up their bank balances at the close of the busy season. In any event, some cash balance must be maintained, even when a concern is borrowing from its bank, since no business can be conducted safely at any time with no cash or bank balance whatsoever.

These deposits, when pooled by the banks, constitute the source from which accommodation is extended to those who need temporary additions to their working capital funds. The total of commercial deposits of all the banks forms a

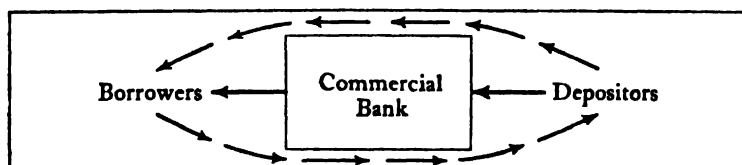


FIG. 11. COMMERCIAL DEPOSITS POOL

pool which is drawn upon when the banks lend to concerns temporarily in need of more funds than they have available for building up their working capital, and is built up again as the business enterprises receiving checks from these borrowers deposit such checks in their own banks. This is shown graphically in the accompanying diagram. The significant point to be noted is that the depositors and borrowers are all of the same general class—business enterprises—and that those who are at one time chiefly depositors at another may be chiefly borrowers.

By way of warning, it should be noted that the funds referred to in the foregoing paragraph do not, in the main, consist of cash. The business man commonly thinks of his bank balance as a cash balance, since it is payable by the bank in hand-to-hand money on demand. Actually, of course, only a comparatively small portion of total deposits is held by the banks in the form of cash or reserve. The commercial deposit pool, then, is largely a pool of credit balances

which are transferred from depositor to depositor and from bank to bank by means of checks. The loans made by one bank and credited to the accounts of the borrowers shortly become deposits of other banks in the system as the borrowers draw checks against their accounts and send them to creditors who deposit them in their own banks. The banking system as a whole is accordingly limited in its lending activities, assuming an effective demand for loans, only by the size of the reserves which the banks find it necessary or desirable to maintain ; but the loans and investments of the individual bank, as will be shown in Chapter XVII, are limited by the amount of deposits which are held with it. Consequently, it is perfectly proper to speak of the lending or investment of commercial deposits by the banks, even though the deposits of any particular bank may have resulted in considerable measure from the lending operations of other banks in the system.

The extension of commercial credit—as represented by the self-liquidating loan—is a proper method of utilizing commercial deposits since it is the purpose of the depositor of such funds to use them shortly himself in the acquisition of goods or materials which will be turned into cash through sale, or to pay for goods and materials already purchased.

The extension of investment credit on the basis of commercial deposits, on the other hand, is ill-advised. The same conclusion applies to the purchase of investment securities on the basis of demand deposits. The investment borrower, whether the bank's customer or the issuer of bonds the bank has bought, uses the funds he obtains to purchase land or fixed capital which is used over a long period in the productive process. An investment loan is repaid, therefore, not from the sale of the land or capital purchased with the proceeds, but gradually from the earnings of the business made possible by the investment. Nevertheless, since the commercial banks do follow the practice of granting investment loans and purchasing investment securities on the basis of commercial deposits, we shall consider that type of loan and investment in this chapter, as well as consumption loans which, in late years, have assumed increasing importance. Consumption loans, which are still of least importance in the present

connection, will be considered first, after which the more significant commercial and investment loans and investments will receive attention.

CONSUMPTION LOANS

The small loan problem.—The typical banking institution has been organized with the purpose in view of lending to industrial and commercial enterprises rather than to the consumer. That consumers are occasionally in a position in which it would be desirable for them to borrow funds, however, is not open to question. Assuming the desirability to the consumer of being able to borrow upon occasion, the need for some sort of agency to care for his credit needs may also be granted. The problem with which we are here concerned revolves around the question, not of the legitimacy of consumer loans, but of whether they should be granted by the banks or should be cared for by some especially adapted agency.

Should the banks grant consumer loans?—Everything considered, the banker will do well to avoid, so far as possible, the extension of loans for consumption purposes. There are, of course, exceptions to this rule. If, for example, one of the bank's customers, whose character is unimpeachable, has a definite sum of money coming in from some source outside his regular income at a definite date, and if he wishes to borrow an amount equal to or less than this outside income a month or two ahead of its receipt, agreeing to pay off the loan when the funds in question are received, the banker may grant the loan with the full assurance that it will be paid at maturity. Consumption loans of the sort described, however, are likely to be in the minority. In the more usual instance, the consumer borrows to satisfy some present need or want with the idea of repaying the loan in installments out of his regular income. In granting such a loan the banker runs the risk that the borrower, because of sickness, decreased income, or overly lavish expenditure, may not be able to reduce his debt at the bank as rapidly as he has promised or as the banker may desire.

In order to protect themselves against loss, the banks commonly require some sort of collateral security against loans

to consumers, or at least an indorsement of the borrower's note by a responsible party. While this action doubtless protects the banks against ultimate loss of the principal, it is ordinarily of little use in securing a prompt reduction or liquidation of the loan. If a prominent citizen of the community, say a doctor, who has borrowed from his bank on the security of some of his stocks or bonds, becomes involved in financial difficulties, so that he cannot pay his note at maturity, the bank will scarcely sell the security, as it is legally entitled to do, to the further embarrassment of the borrower. Rather, the note will be renewed as frequently as necessary until the borrower is able to reduce and finally to extinguish his debt. Thus, what promised to be a fairly liquid loan turns out to be pretty solidly frozen for a considerable period.

More serious than the difficulties just described, which also arise at times in connection with the bank's commercial customers, is the fact that the majority of consumers have little collateral except their household goods which can be put up as security for a loan. Moreover, most consumption loans are for very small amounts. There is accordingly so much expense connected with handling this type of loan that the banker cannot afford to extend credit to consumers at the rate of interest or discount which he charges his commercial customers. The extension of consumption credit involves a specialized technique and a specially trained staff, so that the regular banker is not in a position to engage in this line of activity.

In spite of the foregoing considerations, a substantial number of banks have established personal loan departments, some of which do an extensive business in consumer loans. Perhaps the most exhaustive treatise on the subject¹ estimates that, by the end of 1938, some 1500 commercial banks had personal loan departments and that, through branches of some of these banks, somewhere near 3000 offices were extending this type of loan. It is also estimated that the amount of credit extended at the date in question was in the neighborhood of half a billion dollars and the number

¹ J. M. Chapman and Associates, *Commercial Banks and Consumer Instalment Credit*, p. 3.

of borrowers served during 1938 between 1,000,000 and 1,500,000.

The explanation of this movement is undoubtedly to be found in the easy money situation and the large excess reserves possessed by many banks. In an effort to find a suitable outlet for some of their excess funds, numbers of banks have turned their attention to the personal loan field.

It is not intended here to analyze the problems which arise in connection with personal loans, other than the brief reference to general difficulties presented above. These are taken up in detail in recent works on the subject and the student is referred to such studies for further information.

The solution of the problem.—The author has always held that the solution of the small loan problem lay in the development and extension of specialized agencies—a number of which already exist—to care for the credit needs of consumers, and that, with few exceptions, the commercial banker should not grant personal loans. If the search for earnings leads commercial bankers to establish personal loan departments, however, the assets, reserves, books, etc., of these departments should be fully segregated from the other business of the bank. If this is done, there is little objection as the personal loan department may be considered as a separate, specialized agency operating under the general management of the bank.

COMMERCIAL LOANS

Secured and unsecured loans.—In general, in the United States, the division between investment and commercial loans corresponds rather closely to that between secured and unsecured loans. There are, however, some discrepancies. Inter-bank loans are practically always secured by bonds, although the borrowing bank may use the funds obtained for extending commercial credit. Again, investment banking houses frequently borrow from the commercial banks on the security of stock and bond issues for the purpose of obtaining temporary funds to assist in the marketing of new issues of securities. Such loans are self-liquidating in nature when properly made and may rightly be considered as commercial loans. Finally, some business houses doubtless borrow at

times for commercial purposes upon the security of stocks and bonds which they have in their possession.

In addition to the above-mentioned types of loans or discounts which may be designated "commercial," there are those loans which are secured by warehouse receipts, bills of lading covering merchandise in process of shipment, etc., which are strictly commercial in character. At present these loans are reported together with unsecured loans, but up to 1928 they were reported separately for national banks by the Comptroller of the Currency. On June 30, 1928, the national banks held demand and time loans of this character amounting to \$1,476,442,000 as compared with unsecured loans of \$7,098,455,000 and total loans of \$15,144,995,000 on the same date. It is thus clear that the bulk of the commercial loans is unsecured, and with this type of credit we shall be chiefly concerned in this section of the chapter.

The instruments of commercial credit.—When the bank extends credit to a commercial borrower, the evidence of the latter's indebtedness to the bank may take one of three forms. First, the borrower may give the bank his own unsecured promissory note. Second, he may endorse and turn over to the bank promissory notes which he has received from customers who have purchased his goods on time. Third, he may discount at the bank trade acceptances which have been given him by customers purchasing his goods.

The single-name promissory note.—The first of these types, the borrower's own single-name promissory note, is by far the most commonly used instrument in obtaining commercial loans from the banks in this country. A specimen, showing the form of the note used, is given in Figure 5 (p. 105). The wide use of the single-name note in the United States is an outgrowth of conditions existing during and after the Civil War. The fluctuating value of the currency in that period made it extremely desirable for sellers to obtain cash payments for their goods. They hence arrived at the device of extending credit to customers on open book account, while at the same time offering heavy discounts for immediate or practically immediate payments in cash. The system of trade credit thus established—the open account with cash discount—has been widely retained by sellers to the present

day. Each trade has its normal credit period, as 30, 60, or 90 days, and offers its regular discount for payments in cash within a comparatively few days' time. The buyer gives no obligation of his indebtedness, the seller merely charging his account with the amount of the purchase. Since the conduct of business on the open book account method gives rise to no credit instruments which may be discounted at the bank, the borrower is naturally forced to obtain his credit on the basis of his own promissory note.

Double-name business paper. — In some few lines of business, usually where the credit period allowed is rather extended, it is the custom for the buyer of goods to give his promissory note to the seller for the amount of the bill. Such notes may then be indorsed and discounted at the bank by the seller which gives rise to what is known as *double-name business paper*. According to Professor Phillips, "only in such business as the lumber, some branches of the tobacco business, the jewelry and piano trades, plumbers' supplies and agricultural implements, does the note persist." It is therefore not an important type of trade credit instrument.

The trade acceptance. — The trade acceptance, as noted in Chapter V, may be defined as a time draft drawn by the seller on the buyer of goods, ordering the latter to pay the amount of the draft at a fixed or determinable future date, and accepted by the buyer. A specimen of the form of trade acceptance endorsed by the American Acceptance Council is shown in Figure 6 (p. 106).

The trade acceptance has a number of advantages over the open book account. In a typical case, the seller of goods will, at the time of shipment, draw a draft against the buyer payable in, say, 30 days, covering the price of the goods. This draft is then forwarded to the buyer together with a statement of cash discount allowed. If the buyer wishes to avail himself of the discount, he remits the amount of the draft less the discount and destroys the draft. Otherwise he accepts the draft and returns it to the seller. The seller is then in possession of a definite obligation of the buyer to pay the amount of the draft on a specific date.

The advantages of the trade acceptance to the seller are

that he substitutes a definite obligation in a negotiable form for the indefinite, non-negotiable book account. The acceptance may be discounted at the bank if the seller is in need of funds before it comes due. Further, the buyer, knowing that his acceptance may have been discounted by the seller's bank, is much more likely to make payment promptly than he would on an open account. The turnover of the seller's business may thus be speeded up with a consequent lowering of his costs, while the number of losses on acceptances is likely to be much smaller than on open book accounts.

The buyer also benefits, chiefly by the enhancement of his credit rating as a result of accepting drafts. He may also be able to get a slightly better price from the seller since the latter feels surer of prompt payment than under the open account system, which frequently results in slow payments. The buyer stands to benefit indirectly as well through the necessity of speeding up his own collections in order to be sure of meeting his acceptances at maturity.

The use of trade acceptances is also advantageous to the banker. Such paper, representing actual sales of goods, is strictly self-liquidating in character and makes an excellent addition to the bank's portfolio. Furthermore, it can be sold to the reserve banks in the open market at attractive rates and is, of course, eligible for rediscount with those institutions. In addition to these advantages, the bank receives a certain added protection against loss in the discount of trade acceptances, since the bank's customer is secondarily liable in the event of failure of the acceptor to pay at maturity.

In spite of their manifest advantages, trade acceptances are not as yet widely used in this country. They disappeared with the Civil War and their use has not been largely revived. Since the establishment of the Federal Reserve System, the Federal Reserve Board, the Reserve banks, and, until recently, the American Acceptance Council, have been attempting to increase the popularity of trade acceptances, and it is to be hoped that their efforts in this direction will ultimately be highly successful, although they have not met with the success which they deserve.

The bank credit department.—In any event, whatever type of instrument is used in commercial borrowing at the banks, it is essential for the lending bank thoroughly to investigate the credit standing of its borrowing customers. This is especially true in the case of the majority of commercial loans where no specific collateral is placed with the bank as security. The larger banks, and a constantly increasing number of smaller ones, have accordingly established credit departments for the express purpose of analyzing the credit risks of borrowers.

Credit analysis.—Space does not permit any extended discussion of the analytical work of the credit department. Nevertheless, a cursory description of the methods used will be presented as serving to illustrate the usefulness of this department to the bank management.

In determining the credit worth of a customer who wishes to borrow without security, the bank credit department is concerned with what have been termed *the three C's of credit*—the borrower's character, capacity, and capital. With regard to character, the analyst must depend upon such intangible, or at least qualitative, information as the borrower's reputation in the community for financial integrity, commendable habits, and other good qualities. This information is comparatively easy to obtain and is valuable to the banker so far as it goes.

Capacity is a quality which is likewise difficult to rate quantitatively and the borrower's general reputation for ability in business affairs may have to suffice. If, however, the credit department is able to obtain income accounts and statements of condition of the borrower's business for a fairly long period of successive years, much valuable information with respect to his capacity may thereby be revealed.

It is with respect to capital that the credit department is able to obtain the most detailed information through the analysis of the bank borrower's statement and, if obtainable, his income account. The standard A.B.A. form for corporations is presented in Fig. 12. Somewhat more condensed forms are available for individual business borrowers. In analyzing the statement the banker is interested to find out, first, what are the prospects of repayment of the loan at ma-

CONTINGENT LIABILITIES		SUSCEPTIBILITY FOR DEDUCTION OF	
UNPAID RECEIVABLES, TRADE ACCEPTANCES, OR		DEBIT ACCOUNTS ON CONTRACTS	
UNPAID RECEIVABLES ON TRADE ACCEPTANCES		MAINTAINING LIABILITY FOR PROPOSED ADDITIONAL	
PLANNED OR ASSUMED		TAXES	
CUSTOMERS' ACCOUNTS DISCOUNTED OR SOLD		BONDS OR UNFINISHED CONTRACTS	
CUSTOMERS' ACCOUNTS ASSIGNED OR PLEDGED		PURCHASE COMMITMENTS OUTSTANDING	
ACCOMMODATION PAPER ENDORSEMENTS OR NOTES		LITIGATION IN PROCESS OR THREATENED	
EXCHANGED WITH OTHERS		OTHER CONTINGENT LIABILITIES	

STATEMENT OF PROFIT AND LOSS

FOR THE PERIOD BEGINNING		IN		AND ENDING		IN	
GROSS SALES				TOTAL ADMINISTRATIVE, GENERAL AND SELLING EXPENSES			
LESS: RETURNS AND ALLOWANCES				OPERATING PROFIT			
NET SALES				OTHER INCOME			
COST OF GOODS SOLD				INVESTMENTS			
TOTAL INVESTMENTS AT BEGINNING OF PERIOD				CASH DISCOUNTS RECEIVED			
AND PURCHASES DURING PERIOD				DISCOUNTS FROM NOTES AND ACCOUNTS PREVIOUSLY CHARGED OFF			
LESS: DIRECT LABOR				OTHER			
EXPENSES ONLY				TOTAL			
TOTAL				OTHER EXPENSES			
DEBIT TOTAL INVESTMENTS AT CLOSE OF PERIOD				INTEREST			
GROSS PROFIT				CASH DISCOUNTS GIVEN			
SELLING EXPENSES				OTHER			
SALARIES				TOTAL			
COMMISSION				NET PROFIT OR LOSS BEFORE INCOME TAXES			
TRAVELING				ACCUMULATED FEDERAL INCOME TAXES			
ADVERTISING				ACCUMULATED STATE INCOME TAXES			
TOTAL				TOTAL			
ADMINISTRATIVE AND GENERAL EXPENSES				NET PROFIT OR LOSS CARRIED TO SURPLUS			
OFFICERS' SALARIES							
OTHER SALARIES							
RENT							
DEBIT AND CREDIT ACCOUNTS CHARGED OFF							
DEPRECIATION							
LAST APPROPRIABLE BALANCE							
TOTAL				AMOUNT OF DIVIDENDS DECLARED AND/OR PAID SINCE STATEMENT DATE			

COMPREHENSION OF EARNED SURPLUS		COMPREHENSION OF CAPITAL SURPLUS	
EARNED SURPLUS AT CLOSE OF PREVIOUS FISCAL YEAR		CAPITAL SURPLUS AT CLOSE OF PREVIOUS FISCAL YEAR	
ADD: NET PROFITS		ADD: OTHER INCREASES	
OTHER ADDITIONS (INCREASES)			
TOTAL ADDITIONS		TOTAL ADDITIONS	
LESS: DIVIDENDS PAID		DEDUCTIONS (DECREASES)	
CASH - PRE/PERIOD RATE			
- COMMON RATE			
STOCK - PRE/PERIOD RATE			
- COMMON RATE			
OTHER DEDUCTIONS (DECREASES)			
TOTAL DEDUCTIONS		TOTAL DEDUCTIONS	
EARNED SURPLUS AT END OF PERIOD (SEE BALANCE SHEET)		CAPITAL SURPLUS AT END OF PERIOD (SEE BALANCE SHEET)	

WAS AN AUDIT MADE? _____ NAME OF INDEPENDENT ACCOUNTANTS? _____
 THE FISCAL PERIOD OF THIS CORPORATION CLOSES ON THE _____ DAY OF _____

BASE ACCOUNTS		CREDIT LINES		DEBIT OF LINES		ON WHAT BASIS?	
NAME AND LOCATION OF BANK		CASH DISBURSE		AMOUNT OF LINES		(DISCOUNTS RECEIVABLES COLLATERAL, ETC.)	

FIG. 12. (Cont'd).

NOTES AND TRADE ACCEPTANCES RECEIVABLE --Business Only (excluding those from affiliates)				ACCOUNTS RECEIVABLE --Business Only (excluding those from affiliates)			
NOT DUE				ACCOUNTS CHARGED WITHIN			
RENEWED				30 DAYS			
PART DUE AND PROTESTED				31 TO 60 DAYS			
TOTAL NOTES AND TRADE ACCEPTANCES RECEIVABLE				61 TO 90 DAYS			
LESS RESERVE FOR DOUBTFUL				91 TO 12 MONTHS			
NOTES AND TRADE ACCEPTANCES RECEIVABLE - NET				OVER 12 MONTHS			
AMOUNT CONSIDERED OF SLOW COLLECTION				TOTAL ACCOUNTS RECEIVABLE			
AMOUNT CONSIDERED OF DOUBTFUL COLLECTION				LESS RESERVE FOR DOUBTFUL ACCOUNTS			
				ACCOUNTS RECEIVABLE - NET			
				AMOUNT OF ACCOUNTS CONSIDERED DOUBTFUL			
				SELLING TERMS			

MERCHANDISE							
MERCHANDISE ON HAND				1. AMOUNT OF MERCHANDISE PLEDGED			
- CONSIGNED TO OTHERS				2. IS MERCHANDISE CONSIGNED TO YOU INCLUDED IN ASSETS?			
- IN TRANSIT				3. AT WHAT TIME OF YEAR IS INVENTORY HIGHEST? LOWEST?			
TOTAL				4. AVERAGE AMOUNT OF INVENTORY			
LESS RESERVES 1st JAN.				5. DOES INVENTORY REPRESENT PHYSICAL COUNT? WHEN TAKEN			
TOTAL AS PER STATEMENT				6. DESCRIBE IN DETAIL THE BASIS OF VALUATION			
				7. STATE THE EXTENT OF ACCOUNTANTS VERIFICATION IF ANY			
				8. GIVE DATE (OR DATES) ON WHICH INVENTORY IS TAKEN AND BOOKS ARE CLOSED			

SECURITIES OWNED							
FACE VALUE (GROSS) NUMBER OF SHARES (IF STOCK)	PERCENT OF TOTAL VALUE	DESCRIPTION OF SECURITY	COST	PRESENT BOOK VALUE	MARKET VALUE	INCOME RECEIVED LAST YEAR	TO WHOM PLEDGED
			\$	\$	\$	\$	

ARE ALL SECURITIES OWNED REGISTERED IN THE NAME OF THE CORPORATION?

DOE FROM SUBSIDIARIES AND AFFILIATES							
NAME OF COMPANY	LOCATION	FOR ADVANCES	OTHER DUE	FOR DISBURSEMENT	REMARKS		
		\$		\$			

REAL ESTATE							
LOCATION AND DESCRIPTION			AGE	CONDITION	LAST YEAR'S REVENUE	ANNUAL VALUE	
1					\$	\$	
2							
3							
4							
5							
FIN. INVESTMENT			ESTIMATED PRESENT VALUE	DEPRECIATION (COST) (DEPRECIATION)	DEPRECIATION	W.D. (IN MONTHS)	YEARLY GROSS PROFIT, NET INCOME
1	\$	\$					\$
2							
3							
4							
5							

THE LEGAL AND EQUITABLE TITLE TO ALL THE REAL ESTATE LISTED ABOVE IS SOLELY IN THE CORPORATION'S NAME, EXCEPT AS FOLLOWS

IF BOOK VALUE, BEFORE DEPRECIATION RESERVES, HAS DECREASED DURING THE YEAR STATE REASON

LOAN INFORMATION					
NAME OF PERSON ISSUED	TYPE OF POLICY	FACE AMOUNT OF POLICY	TOTAL LOAN INTERESTS PAID	TOTAL LOAN AMOUNT PAID	TO WHICH POLICY IS ASSIGNED
		\$	\$	\$	

FIG. 12. (Cont'd).

BOND ISSUES (Describe each issue separately)				
DESCRIPTION OF ASSETS (INCLUDING CURRENT ASSETS, IF ANY) PLACED TO SECURE BOND ISSUES				
SUMMARY OF INDEBTURE PROVISIONS, INCLUDING SINKING FUND REQUIREMENTS				
THERE ARE NO DEFAULTS IN CONNECTION WITH ANY OF THE PROVISIONS OF THE INDEBTURES, EXCEPT AS FOLLOWS				
NAME AND ADDRESS OF TRUSTEES				
CAPITAL STOCK				
PREFERRED	\$	PAR VALUE	\$	CUMULATIVE
AUTHORIZED				
UNISSUED				
OUTSTANDING				
COMMON	\$	PAR VALUE	\$	
AUTHORIZED				
UNISSUED				
OUTSTANDING				
COMMON NO PAR VALUE - SHARES OUTSTANDING				
SUMMARY OF PREFERRED STOCK PROVISIONS				
VOTING POWERS OF PREFERRED STOCKHOLDERS				
AMOUNT OF PREFERRED STOCK DIVIDENDS ACCUMULATED AND UNPAID REPRESENTING A PERIOD OF				
LIABILITY ISSUES (Mortgages, Trusts, Guaranty Policies, etc.)				
NAME AND ADDRESS OF INSURANCE COMPANY	TYPE OF POLICY	AMOUNT OF POLICY	PERMANENT BOND	PERMIT IT BOND
		\$	\$	
OTHER ASSETS				
TYPE	ACQUIRED ON	QUANTITY	ESTIMATED	VALUE
STOCK				
MERCHANDISE				
BUILDINGS				
MACHINERY AND EQUIPMENT				
FURNITURE AND FIXTURES				
TRUCKS, AUTOS, WAGONS, ETC.				
ACCOUNTS AND NOTES RECEIVABLE				
CREDIT				
USE AND IN				
COPYRIGHT				
FIDELITY				
BONDS				
OTHER				
OFFICERS				
NAME IN FULL	NUMBER OF SHARES OWNED	PERCENTAGE OWNED	ADDRESS	
PRESIDENT				
VICE-PRES.				
VICE-PRES.				
SECRETARY				
TREASURER				
DIRECTORS				
NAME IN FULL	NUMBER OF SHARES OWNED	PERCENTAGE OWNED	ADDRESS	
<p>IN SUBMITTING THE FOREGOING STATEMENT THE UNDERSIGNED GUARANTEES ITS ACCURACY WITH THE INTENT THAT IT BE RELIED UPON BY THE AFORESAID BANK IN EXTENDING CREDIT TO THE UNDERSIGNED AND WARRANTS THAT _____ HAS NOT KNOWINGLY WITHHELD ANY INFORMATION THAT MIGHT AFFECT CREDIT RISK AND THE UNDERSIGNED EXPRESSLY AGREES TO NOTIFY IMMEDIATELY SAID BANK IN WRITING OF ANY MATERIAL CHANGE IN _____ FINANCIAL CONDITION UPON THE APPLICATION FOR FURTHER CREDIT TO BE MADE OR NOT AND IN THE ABSENCE OF SUCH WRITTEN NOTICE IT IS EXPRESSLY AGREED THAT SAID BANK IN GRANTING NEW OR CONTINUING CREDIT MAY RELY ON THIS STATEMENT AS HAVING THE SAME FORCE AND EFFECT AS IF DELIVERED UPON THE DATE ADDITIONAL CREDIT IS REQUESTED OR EXTENDING CREDIT EXTENDED OR CONTINUED</p>				
<p>SIGNED AT _____</p> <p>THIS _____ DAY OF _____ 19____</p> <p style="text-align: right;">SIGNATURE OF CORPORATION _____</p> <p style="text-align: right;">OFFICER _____</p> <p style="text-align: right;">TITLE _____</p>				

FIG. 12. (Cont'd).

turity, and second, if the loan is not paid at maturity, what are the chances of its ultimate payment? The first question is answered by an examination of the quick assets and current liabilities of the prospective borrower, and the second by reference to the permanent assets and long-term liabilities.

Since the banker would not grant a loan which he did not expect to be paid at maturity, attention is naturally focussed on the relation between the current assets and liabilities while the slow assets and long-time debt are of secondary significance. Accordingly, the borrower's statement, ordinarily submitted on a form furnished by the bank, is arranged in the fashion indicated in the accompanying form, with the assets listed in the order of their liquidity and the liabilities in order of their maturity. Before examining briefly each of the items listed, it will be desirable to consider the theoretical basis of the analysis of the bank borrower's statement.

The borrower wishes to obtain funds to supplement his working capital, that is, to assist in the manufacture or purchase and sale of goods. If such a loan is granted, the bank wishes to ascertain, so far as possible by an analysis of the borrower's statement, the probability of the loan's payment at maturity. The quick assets show the amount of cash on hand, the amount of receivables which will shortly turn into cash, and the amount of inventory which will turn first into receivables and then into cash. To the cash received from the sale of goods and the collection of receivables the bank must look for the repayment of its loan. But the current liabilities, such as accounts, notes and/or acceptances payable, must also be paid out of the same source. The banker is therefore desirous of knowing whether there is a sufficient excess of quick assets over current liabilities to insure, other things being equal, the repayment of his loan. The ratio of quick assets to current liabilities—known as the current ratio—is therefore of considerable importance in the analysis of the borrower's statement.

It goes without saying that a correct appraisal of the significance of the current ratio depends upon an accurate estimate of the individual items that enter into the asset and liability sides of the statement. Cash should be checked to

see that it is accurately reported and that it forms a suitable proportion of the quick assets. Unless the borrower's business is one of those in which the promissory note is used, the amount of notes receivable should be small since any considerable volume of notes is indicative of slow or uncollectible accounts. Accounts receivable will be the most important receivables item in the ordinary lines of business, and the analyst should use care to ascertain that a sufficiently liberal allowance for losses on bad debts has been set aside on this item. If acceptances are used, this allowance may properly be smaller.

Inventory presents many technical difficulties of valuation which cannot be taken up here. Merchandise inventory is conservatively valued at cost or market price, whichever is lower. In the case of a manufacturing concern, raw materials may be valued at cost, goods in process preferably at cost of the raw materials contained therein, and finished goods at total cost not including any item of selling expense. Attempts should be made to ascertain the freshness and salability of merchandise and to make sure that unsalable goods have been charged off.

Prepayments or deferred assets may properly be considered as current, although they have no liquidating value in the event of failure. Marketable stocks and bonds or commercial paper, when held by a business concern as a temporary investment, are also quick assets of high quality, but if held in large amounts such securities should normally be sold by the borrower to obtain working capital in place of borrowing at the bank.

The slow assets are of chief importance in case of failure, and should be accordingly valued conservatively on a liquidation basis.

The current liabilities require little comment. They should be examined carefully to see that they are accurately and completely reported, that accounts payable are not past due, and that notes payable do not appear in significant amounts except in the case of businesses in which the promissory note is normally used. If bond interest or the repayment of bond principal is due within the current operating period, it should be known that proper measures have been

taken to provide for these payments. The slow liabilities are of interest in showing the extent of the bonded or mortgage indebtedness, as indicating both the claims of creditors against the property of the borrower and the amount of current income necessary for the payment of interest on the debt. Depreciation should also be considered to see whether a proper allowance is being made to preserve the capital intact and to determine the validity of the profits figures reported by the borrower.

The current ratio.—Having determined the accuracy of the individual items on the statement, the banker is in a position to examine significant ratios and relationships. Of these, the current ratio is of prime importance since it indicates the excess of quick assets over current liabilities. The chief question arising in this connection is, how high should the current ratio be? The only answer that can be given to this question is: High enough to insure the payment of the borrower's liabilities, including his debt to the bank, as they come due. "From this standpoint, it is clear that an installment furniture house, whose receivables are payable in installments running over a period of many months and whose turnover of merchandise inventory is relatively slow, must have a large amount of quick assets in proportion to current liabilities to provide a sufficient income of cash to take care of current maturities among the liabilities. That is to say, the installment house would have to have a relatively high current ratio. On the other hand, a flour mill which sells largely for cash, or at least on only short time, and which turns its inventory rapidly, would not need relatively as large an amount of quick assets to provide sufficient cash to meet the current maturities among its liabilities. That is, a lower current ratio would be in order."²

In a seasonal business, the date upon which the statement was rendered would be of significance. "The statement of a wholesale milliner, for example, will usually show an exceedingly high ratio as of about November 30th, and may show a ratio of considerably less than two for one as of the end of March. . . . November is an end-of-season month, when the business should be in a very liquid condition and

² Schwulst, E. B., *The Extension of Bank Credit*, p. 13.

have most of its liabilities paid off ; whereas March is in the midst of the busy spring season, when the milliner is leaning heavily upon his creditors.”³

While it is usually considered that a ratio of two to one is satisfactory, the foregoing quotations should indicate that this may not always be the case. The proper ratio will vary from this assumed norm with variations in the nature, turnover, and seasonality of the business under consideration. The bank credit man needs more than this simple rule of thumb properly to estimate the significance of the current ratio. A precise knowledge of the business in question is essential.

The turnover of receivables.—The turnover of receivables is found by dividing the net sales figure by the amount of the receivables. Even when an income account is not obtained by the credit man, the figure for net sales should be requested in order to supplement the information on the statement, as it is essential in computing this and the merchandise turnover. Having obtained the figure for receivables turnover, it may profitably be compared with the proper turnover figure. If a firm sells on sixty days’ time, its turnover of receivables should be six times per year. Making allowance for season variation, if the calculated turnover is less than six times, it indicates slow collections and should be checked by the credit man and called to the attention of the borrower.

Inventory turnover.—The turnover of merchandise inventory is found by dividing the net sales for the year at cost by the average annual inventory. If the average annual inventory is not obtainable, the figure from the statement will have to be used and allowance must then be made for seasonal variation in the business. The figure for merchandise inventory turnover, when compared with what is normal in the particular line of trade in question, gives a good indication of the efficiency of the borrower. Too slow a turnover means decreased profits and undue reliance on the banks for credit accommodation.

Debt to capital or net worth.—The bank credit man will also be interested in the ratio of debt to capital or net worth.

³ *Ibid.*, p. 15.

Just what the proportion should be depends largely upon the nature of the business. "A business with slow turnovers and handling non-staple commodities should depend relatively less upon creditors than a business not subject to those disadvantages. Then the season of the year is very important. The cotton merchant, for example, should be practically out of debt in mid-summer; whereas in November or December his borrowings may run far in excess of his net worth.⁴ The wholesale produce dealer should reduce his indebtedness very materially during the spring and summer, but might owe quite heavily during the fall and winter. In general, it might be said that if the indebtedness exceeds from seventy to eighty per cent of the net worth the banker should inquire into the cause. If a large part of the debt is of a fixed or slow nature, a high proportion is not so serious as it would be if all the indebtedness were current. It should also be stated that the smaller the concern the lower the ratio of debt to worth should be, because small concerns are shorter lived on the average than large ones, and, from the very fact that they are small, they are less able to weather the storms constantly to be encountered in every field of competitive economic activity."⁵

The banker is concerned to a lesser extent with the analysis of the assets and liabilities of a concern in case of failure than as a going concern. He cannot, however, ignore the possibility of failure, and so examines the assets and indebtedness with a view to ascertaining the ability of the borrower's business, in liquidation, to furnish ultimate repayment of the loan. The assets are considered from this point of view by what they would bring under forced liquidation. If the loan is to be granted, the liquidating value of the assets should be sufficient to insure the eventual repayment of the loan in the event of failure.

The income account. — Whenever possible the bank credit man should obtain the borrower's income account as well as the statement of his business condition. The former will furnish him information concerning salaries, cost of ma-

⁴ "It should be stated, however, that his borrowings will probably be secured by cotton."

⁵ Schwulst, *op. cit.*, p. 17.

terials, depreciation, insurance, losses, profits and dividends that are of great value in estimating the credit risk. When an income account is not obtainable, various significant items such as sales, insurance, etc., should be required to supplement the information contained in the statement alone. It will be noted that on the second page of the form reproduced earlier in the chapter, what amounts to an income account statement is required. Less inclusive information is required in the simpler individual form, but, even there, the more important items in the income account are requested.

It must be emphasized that the foregoing analysis is extremely sketchy and is intended only to indicate the general principles involved. Other ratios than those mentioned should be considered and many details not mentioned above must be gone into. Mr. Roy A. Foulke has worked up data for fourteen important ratios, all of which have some use in credit analysis.⁶ It is obvious, then, that capable credit analysis is not as simple as the brief discussion in the present chapter might indicate.

Other sources of information.—Although depending largely on the type of analysis just sketched, the credit man also gets information from any other possible source. Mercantile agencies, other banks, trade credit men, etc., are relied upon in various degrees, and the personal interview with the borrower still plays a part and often elicits useful information. In short, the efficient credit department will leave no stone unturned in securing any data that will materially assist it in its analyses.

Safety of unsecured commercial loans.—Although there are no published figures showing relative losses on secured and unsecured loans, the statement has sometimes been made that the average bank suffers greater losses on its secured loans than it does on those which are unsecured. If this is true, the explanation doubtless lies in the care with which the business position of the unsecured borrower is examined by the well-managed bank before credit is granted. There is less incentive to make so thorough an analysis in the case of

⁶ R. A. Foulke, *The Balance Sheet of the Future*, Dun & Bradstreet, Inc., 1941. For a highly detailed study of credit analysis see an excellent piece of work, *Practical Bank Credit*, by R. A. Foulke and H. V. Prochnow.

secured loans, and if the security proves inadequate, losses which could have been avoided by a careful analysis may ensue.

Liquidity of commercial loans.—Although commercial loans, whether secured or unsecured, are self-liquidating in character, they do not always exhibit a marked liquidity in practice. In a non-seasonal business, for example, goods may be sold in sufficient amounts to bring in the necessary funds to repay the loan at maturity. Nevertheless, a new loan may be desired to assist with further output. In fact, such a business might be more or less continually in debt—unless the level of business declines—and yet each single loan, or renewal, would be of a self-liquidating character. There would seem to be no objection to this type of loan. It would be wise for the bank to check a borrower's liquidity by requiring that he be out of debt at least once during the year, but more or less continuous indebtedness is not objectionable as long as paralleled by a continuous flow of goods to the market.

INVESTMENT LOANS

Loans secured by stocks and bonds.—The most important class of investment loans consist of loans secured by stocks and bonds. It has already been noted that some of these loans may represent the extension of credit for consumption purposes while others may be classed as commercial from the point of view of the uses to which the borrowed funds are put. Nevertheless, the great bulk of loans of this type may properly be considered as furnishing capital for investment uses. Presumably, then, they should be based primarily on savings deposits, not on deposits payable on demand.

This is a point which requires further emphasis for the reason that loans on stocks and bonds have a deceptive appearance of liquidity. In the first place, loans of this sort are usually granted for a moderate period of time, such as ninety days, and in the second place, the banker is amply protected against loss or failure to pay at maturity by the collateral deposited by the borrower. Figure 13 is a reproduction of the collateral loan agreement used by a large New York bank. It will be noted that the bank has the right to call for addi-

tional collateral during the life of the loan, to sell the collateral and terminate the loan immediately if such added margin is not forthcoming, or to terminate the loan at maturity through sale of the collateral if the borrower is unable or unwilling to pay the loan when it comes due.

In spite of such precautions, loans on stock and bond security are apt to be indefinitely renewed. As long as the borrower keeps a sufficient margin of salable security against his loan, he feels that the banker should renew it as often as desired, while the banker himself hesitates to demand payment from a borrowing customer at the maturity of the loan if a renewal is requested. The borrower is thus permitted to carry securities for an indeterminate period on the basis of bank credit.

It would be possible for the bank to assist the individual investor to purchase securities, on the basis of loans secured by stocks and bonds, and, at the same, to inject a considerable measure of liquidity into such loans if periodic reduction in the principal of the loan were insisted upon. In this fashion the banks could finance the distribution of securities to individual investors on loans that would exhibit a much greater degree of real liquidity than many of them now possess.

Loans on real estate.—The other important class of investment loans consists of loans on the security of real estate. Such loans have no proper place in the portfolio of the commercial bank. Since most of the so-called commercial banks accept savings deposits, however, they do extend real estate loans to varying extents. Loans of this type will be considered under the head of savings banking at a later point (Chapter XXXIX), and need only be mentioned here. Suffice it to note that they comprise a highly specialized class of loans which should be handled only by competent experts.

INVESTMENTS

Investments and commercial banking.—Bond investments for secondary reserve purposes have already been discussed briefly in a previous chapter (Chapter XIII). Strictly speaking, bond investments, aside from the use of bonds as a secondary reserve, have no place in a discussion of commercial banking. On the other hand, savings and time deposits,

PAYABLE IN FUNDS CURRENT AT THE NEW YORK CLEARING HOUSE

\$..... New York,, 19... ..

....., after date, without grace,
the undersigned, for value received, jointly and severally promise to pay to
the GUARANTY TRUST COMPANY OF NEW YORK, or order, at the principal office of said Trust
Company in the City of New York,

..... Dollars,
with interest at the rate of per cent per annum, payable monthly on the last day of each
month debiting the amount of such interest to the deposit account of the undersigned, having
deposited and pledged with the said Trust Company as collateral security for the due payment
of this note and of any and all other obligations or liabilities of the undersigned to said Trust
Company, due or to become due, or which may hereafter be contracted or existing, the following
property:

.....
.....
.....
.....
.....

The undersigned hereby jointly and severally agree to deposit with the Trust Company
such additional collateral security as may from time to time be demanded, and hereby give
to the Trust Company a lien upon and hereby pledge all money and property of the under-
signed now or at any time hereafter in the possession of the Trust Company, including any balance
of any deposit account of the undersigned with the Trust Company, for the due payment of this
note and of all said obligations and liabilities.

Upon the non-payment of this note or of any of the aforesaid obligations or liabilities, or
upon the non-performance of any of the agreements of this note by the undersigned, then the
whole or any part of any or all of the aforesaid obligations or liabilities of the undersigned shall
mature at the election of the Trust Company upon demand or by presentation thereof for pay-
ment; and in any such event the Trust Company shall have the right to sell, assign and deliver
the whole or any part of the property hereinabove specifically described or of any property sub-
stituted therefor or of any additions thereto or of any other property of the undersigned then in
its possession, at any time or times either at the New York Stock Exchange or at any broker's
board or at public or private sale, either for cash or on credit or for future delivery, without
demand, advertisement or notice, which are hereby waived, and to apply the net proceeds to the
payment of this note and of any or all other such obligations or liabilities of any of the under-
signed and of all expenses, accounting for any surplus; the undersigned remaining liable for any
deficiency. Upon any sale as aforesaid, the Trust Company may purchase and hold the whole
or any part of the property sold, free from any claim or right of redemption of the undersigned,
which is hereby waived and released.

In the event of the insolvency or bankruptcy of, or appointment of a receiver for any of the
undersigned, this note and all said obligations and liabilities shall forthwith become due and
payable without demand or notice.

[SPECIMEN]

FIG. 13. COLLATERAL LOAN AGREEMENT

of which the commercial banks hold large amounts, may properly be invested in bonds or notes of a type not suitable for secondary reserve investments.

As a matter of fact, the only reason for even a brief discussion of investments, other than secondary reserves, in the present connection is the fact that, unfortunately, among most of our banks there is no segregation of assets of the commercial and savings departments. A bank merely has a loan portfolio and an investment account, and the sum of these two plus reserves constitutes the assets held against deposits of both demand and time classification. Moreover, until recently, the trend of commercial loans has been downward since 1920, and the bankers' attention has therefore been directed more and more to his investment account.

Commercial bank investments still unimportant.—In spite of the observations just made, it would appear that commercial bank investments, other than those purchased for secondary reserves, are not an important item. Let us engage in a little segregating of assets on our own account from the statement of member banks as of the end of 1940. On December 31st of that year we find the following situation :

Commercial and industrial loans	\$ 6,204,000,000	
Agricultural loans	865,000,000	
Open market paper	456,000,000	
U. S. Government obligations :		
Bills	\$ 652,000,000	
Notes	2,594,000,000	3,246,000,000
Reserves with Federal Reserve banks		13,992,000,000
Total	\$24,763,000,000	
Demand deposits adjusted	\$30,429,000,000	

On the above basis, business and agricultural loans (largely commercial), open market commercial paper, bills and notes of the United States and legal reserves totaled nearly \$6,000,000,000 less than demand deposits adjusted. However, interbank deposits amounted to more than \$9,500,000,000, while cash in vault amounted to more than \$900,000,000. Counting the last two items as working reserves, the aggregate reserves on the date in question amounted to over \$24,300,000,000, which, added to the commercial type assets

(listed above), would increase reserves plus commercial type assets to more than \$35,100,000,000. Moreover, government bonds and loans to brokers, which might be counted as secondary reserves, have not been included in this calculation. These two items totaled nearly \$10,000,000,000 on December 31, 1940.

It seems clear, then, that the investment problem of commercial banks, other than that of secondary reserve investments, may still be termed a problem of investing time deposits and capital funds, and need not be considered in the present connection.

Conclusion.—So far we have proceeded on the assumption that the banker grants loans from the funds that are deposited with him. There is no objection to this concept so far as the individual banker is concerned, but from the standpoint of the banking system it gives an erroneous impression. It will accordingly be necessary to explain carefully the interrelation of reserves, loans and deposits both for the individual bank and for the system of banks as a whole. Before doing so, however, we shall consider the foreign exchange functions performed by the commercial banks.

REFERENCES

- Atkins, P. M. *Bank Bond Investment and Secondary Reserve Management*. Boston. 1940.
- Chapman, J. M. *Commercial Banks and Consumer Instalment Credit*. New York. 1940.
- Clark, F. *Financing the Consumer*. New York. 1930.
- Foulke, R. A. and Prochnow, H. V. *Practical Bank Credit*. New York. 1939.
- Foulke, R. A. *The Balance Sheet of the Future*. New York. 1941.
- Jennings, H. C. *The Consumer in Commercial Banking*. New York. 1939.
- Munn, G. G. *Bank Credit*. New York. 1925.
- Neifeld, M. R. *Co-Operative Consumer Credit*. New York. 1936.
- Neifeld, M. R. *Personal Finance Comes of Age*. New York. 1939.
- Nugent, R. *Consumer Credit and Economic Stability*. New York. 1939.
- Phillips, C. A. *Bank Credit*, Part II. New York. 1920.
- Rodkey, R. G. *Bank Investment and Reserves*. Ann Arbor. 1940.
- Schwulst, E. B. *The Extension of Bank Credit*. Boston. 1927.
- Wilkinson, J. H. *Investment Policies for Commercial Banks*. New York. 1938.
- Young, R. A. and associates. *Personal Finance Companies and Their Credit Policies*. New York. 1940.

CHAPTER XV

FOREIGN EXCHANGE FUNCTIONS

Introduction.—The preceding chapters have been concerned with the functions of the commercial bank in extending credit to domestic producers and merchants, and in facilitating domestic exchange through the creation of bank notes and the check currency. In addition to these functions, the banks also perform valuable services in assisting the financing of foreign trade transactions and in furnishing facilities for making foreign payments. This and the following chapter will be devoted to a discussion of these foreign exchange functions.

The nature of foreign trade financing.—Fundamentally, foreign trade is exactly similar to domestic trade, but since in foreign trade buyers and sellers are located in different countries with different business laws and practices and different monetary units, the financing of foreign commerce is somewhat more complicated than domestic trade financing.

One important difference between domestic and foreign trade, so far as this country is concerned, is to be found in the methods used in extending trade credit. Within the United States the open book account is commonly used, the seller specifying on the invoice the length of the credit period allowed as well as discount, if any, for cash payment, and charging the account of the buyer on his books. In foreign trade, on the other hand, the bill of exchange, or draft, is used almost entirely. An exporter in the United States, for example, in selling a bill of goods to a French importing house, will draw a draft against the importer payable upon presentation or so many days after presentation in dollars or francs as the case may be. Or the importer may arrange to have the American exporter draw the draft on his bank in Paris, or on a London bank, instead of against himself. In any event, some sort of draft will be drawn by

the exporter, who will have to have recourse to the foreign exchange department of his bank in effecting its collection or payment.

To cite another example, suppose an American importer has been drawn upon by an English exporter in the amount of £5000 covering payment for a bill of goods and that he must pay the draft before obtaining the goods. The importer has only dollars with which to pay the draft, but the exporter demands payment in pounds sterling. Here again the foreign exchange department of the importer's bank must be called upon. Through that department, the importer can buy a check—drawn by his bank against its account in an English correspondent and payable to the order of the English exporter—for the number of pounds needed and pay for it in dollars at the current rate of exchange on London.

Another way in which the bank assists in foreign financing is by accepting drafts drawn upon itself on behalf of its customer. An importer in New York may wish 90 days' time in paying for a bill of goods imported from Germany. But the German exporter, being without knowledge of the importer's credit standing, is loath to allow the goods to get into the hands of the importer before receiving payment. If, however, the importer can persuade his bank to accept the draft drawn by the German exporter, the latter will be perfectly willing to allow the 90 days' time because he will be protected by the acceptance of a bank of known standing.

The foregoing examples have made it clear, first, that some sort of draft or bill of exchange¹ is used in almost every foreign trade transaction, and second, that the foreign exchange department of a bank is an essential factor in foreign trade financing. Before examining the part played by the bank in more detail, it will avoid confusion if we examine the different types of drafts that are used in this connection.

Types of bills of exchange.—Bills of exchange or drafts used in connection with foreign transactions may be divided into two main classes, bankers' bills and commercial bills.

¹ These two terms are interchangeable.

Bankers' bills are drawn by one bank or financial house on another and have no documents attached. They are hence known as clean bills and are frequently payable on demand or at sight, although at times they are made payable at a definite date in the future.

Commercial bills, like bankers' bills, may be payable at sight, but as a rule they are drawn with a definite or determinable future maturity date. If no documents are attached to the bill, it is known as a clean bill. Thus, if an exporter in the United States draws a draft on an English importer for £5000, and does not attach shipping and other documents to the bill, it is a commercial clean bill. Unless the credit standing of the English importer is exceptionally well known, however, the exporter's bank might hesitate to purchase such a draft since it would be unsecured in the transaction, and even if the draft were purchased by the bank, the rate paid would be less than the rate on secured bills. For this reason, most commercial bills have documents giving title to the goods attached to them and are accordingly known as documentary bills.

D. A. and D. P. bills.—When a documentary bill is payable at sight, it does not have to be accepted by the drawee, as the payment of the draft constitutes its acceptance. In respect to time bills, however, the drawee must ordinarily accept the bill in order to fix the maturity date. A bill drawn at ninety days sight, for example, is a bill payable ninety days after its acceptance by the drawee. Time bills of this sort may be designated either as documentary acceptance—or D. A.—bills, or as documentary payment—or D. P.—bills. In the case of a D. A. bill, the drawee receives the documents, which give him control of the goods, upon acceptance. With respect to D. P. bills, on the other hand, the drawee's acceptance merely fixes the maturity of the bill, and the drawee does not obtain the documents until he pays the bill.

If a D. P. bill is drawn payable at sixty days sight, the drawee has the privilege of waiting sixty days after accepting the bill (plus days of grace in certain countries) before paying it. Should he wish to make payment before the sixty days have elapsed, he may do so at a rebate, the rebate

representing interest or discount on the bill for the number of days to its maturity at the time it is paid.

When an exporter who has sold goods to a foreign importer draws a draft directly against the latter, a D. P. bill is likely to be used unless the importer's name and credit standing are known to be good in the country of the exporter. When the draft is drawn against the importer's bank under a commercial letter of credit, however, it will invariably be in the form of a D. A. bill, since the acceptance of a bank in itself furnishes satisfactory assurance that the bill will be paid at maturity.

Classification of bills. — The preceding discussion may be summed up by classifying the different types of bills described in the form of a table as follows :

- I. Bankers' bills
 - A. Demand — bankers' checks drawn against foreign accounts
 - B. Time — bills of definite future maturity date
- II. Commercial bills
 - A. Sight or demand
 - 1. Clean
 - 2. Documentary
 - B. Time
 - 1. Clean
 - 2. Documentary
 - a. Documents for acceptance
 - b. Documents for payment

Cables. — In making payments to a foreign country, the usual method is to purchase a banker's draft, drawn against his account in that country, and mail it to the foreign creditor. At times, however, it may be necessary to effect a payment in foreign funds immediately, in which event it is possible to buy a cable from the foreign exchange banker. The banker, instead of selling his own check against his foreign account, cables his foreign correspondent to pay the required amount to the party designated by the customer who is buying the cable. The transfer of funds is then effected practically immediately, thus saving the time which would be necessary to mail a sight draft to the foreign country.

While a cable is not exactly a bill of exchange, it accomplishes the same end as a banker's sight draft, with an added

saving of time, and should hence be mentioned in a description of the various types of bills used in effecting foreign payments.

The bank acceptance in foreign trade financing.—Space is lacking to permit a detailed consideration of foreign trade financing.² In such financing, the bank is called upon to assist in at least some phase of practically every transaction. Even when an exporter draws a draft directly on the foreign importer, he will either discount it at his bank or turn it over to the bank for collection, and if the draft is drawn in terms of dollars, the importer, when he comes to pay it, will have to purchase a dollar draft or check from his banker in order to effect a payment. It is, however, with the use of the bank acceptance, rather than these other transactions, that we shall be concerned in this chapter. In fact, it is with respect to the use of this instrument that the bank comes most intimately in contact with the details of foreign trade financing.

Nature of the banker's acceptance.—A banker's acceptance, as pointed out in Chapter V, is a time draft drawn on a bank and accepted by it. The bank accepts the draft by stamping the word "Accepted" across the face, together with the date and place of payment and the signature of the proper official. A specimen of a banker's acceptance, showing the form and make-up of the instrument, appears in Figure 7 (p. 107).

Having accepted a draft, the bank becomes directly liable for the payment of the amount of the draft at maturity. In the event of failure of the accepting bank, the holder of the acceptance possesses an equal claim to that of the depositors against the failed banks' assets. In addition to the direct liability of the accepting bank, the drawer of the draft is secondarily liable and the indorsers, if any, are also liable in the order of their indorsement. Furthermore, the acceptance is frequently secured by salable goods, which adds to its safety. Actually, then, the holder of a banker's acceptance is more adequately protected against loss than one of the bank's depositors.

² For detailed information on this score, see Eldridge, F. R., *Financing Export Shipments*, and Towers, G. F., *Financing Foreign Trade*.

Distinction between acceptances and loans.—In extending an acceptance credit to a customer, i.e., in agreeing to accept drafts in his behalf, a bank does not lend any of its own funds. Rather, it substitutes its own credit standing for that of the customer and thus makes it easy to dispose of the accepted drafts to other banks or investors who are seeking an outlet for temporary surplus funds. Only when a bank buys its own acceptance is it lending money to the customer. Otherwise it is merely lending its credit standing.

This being the case, a bank must obviously use great care in granting acceptance credits. It expects the customer to whom the credit is granted to furnish the funds with which to pay the acceptance when due, but if the customer fails to do so, the bank is nevertheless liable to make the payment. Consequently, the honesty and ability of the taker of the credit to fulfill his obligation to the bank are investigated in an exacting fashion before such a credit is granted.

Financing an import transaction with bankers' acceptances.—For purposes of illustration, consider the case of a New York importer purchasing a bill of goods from a French exporting establishment. The importer wants ninety days' time in which to dispose of the goods and consequently requests credit for that period from the exporter. The French exporting house, while willing to give the ninety days' credit, is uncertain of the credit standing of the importer and so hesitates to draw a D. A. draft on him directly. If the importer, however, will furnish the exporter with a letter of credit on his New York bank, the exporting house will be pleased to extend the desired ninety days' credit. The importer accordingly goes to his bank and obtains the necessary letter of credit.

The commercial letter of credit.—The letter of credit obtained by the American importer from his bank is the bank's authorization to the foreign exporter to draw drafts against it (the importer's bank) up to a specified amount and under certain specified conditions. When "irrevocable" it becomes a direct liability of the bank to accept any draft or drafts drawn against it by the stipulated party, provided that said drafts are drawn according to the instructions contained in the letter of credit. The importer, in order to obtain the

letter of credit, must agree to furnish the bank with funds with which to meet the drafts drawn under the letter when they mature, as well as to certain other conditions. The form of this type of letter of credit, together with the agreement between the importer and the bank, is shown in Figures 14 (a) and 14 (b).

Subsequent steps.—The letter of credit having been issued by the bank to the importer is forwarded by mail to the French exporter, who, under its authority, ships the goods, draws a draft against the American bank in dollars for the amount of the bill, attaches the required documents to the draft, and sells the same to his bank in Paris at the prevailing rate of exchange on this type of bill. The Paris banker is perfectly willing to buy the bill, since he is assured by the letter of credit that it will be accepted upon presentation by the American bank. The exporter is accordingly paid in francs and is through with the transaction.

The next step is taken by the Paris banker who sends the bill with documents attached to his correspondent bank in New York. The latter then presents the bill to the importer's bank (on which it is drawn) for acceptance.³ Upon accepting the bill, the importer's bank obtains the documents while the Paris bank's New York correspondent retains the accepted draft.

The disposition of the accepted bill will depend upon the instructions of the Paris bank. It may either be held by the latter's New York correspondent until maturity or it may be discounted immediately in the acceptance market. Assuming that the banker in Paris wishes immediately to build up his account in New York, he will instruct his correspondent to discount the acceptance in the market and credit his account with the proceeds. If this is done, the Paris banker—having received payment in the form of a dollar credit to his New York account—drops out of the transaction.

Meanwhile, the possession of the documents gives the accepting bank control over the goods which have been shipped by the French exporter. But if the importer is to derive

³ Of course, if the New York correspondent of the Paris bank should be the same bank as that on which the draft was drawn, the latter would accept the bill as soon as it was received from Paris.

any benefit from the ninety-day period until the maturity of the acceptance, he must be able to obtain the goods in order that he may sell them and thereby come into possession of the necessary funds with which to pay his obligation to the bank upon the maturity of the accepted draft. The accepting bank, on the other hand, by turning over the documents to the importer, parts with its tangible security.

In order to protect the bank and yet permit the importer to obtain the goods, an instrument known as a *trust receipt* is signed by the importer in exchange for the documents. The trust receipt engages the importer to act as agent for the bank in the sale or storage of the goods and to turn over to the bank any sums received from the sale of such goods for the purpose of furnishing the bank with the necessary funds to pay the acceptance at maturity.⁴ The bank in effect retains ownership in the goods, but employs the importer to act as its agent in their disposal.

To complete the transaction, when the acceptance comes due it will be presented to the importer's bank for payment by the party holding it at that time. In the course of the ninety days prior to the maturity of the acceptance the importer will have presumably sold the goods purchased from France and will have furnished the bank with the necessary funds to pay the bill. The bank accordingly pays the acceptance with the funds received from the importer and the transaction is completed.

A concise graphic portrayal of the steps involved in the foregoing type of transaction is given in Figure 15, prepared by the Federal Reserve Bank of Philadelphia.

Financing an export transaction with bankers' acceptances.—The dollar bank acceptance may also be made use of in a somewhat different fashion by the American exporter. For example, suppose that a New York exporting house sells a bill of goods amounting to \$10,000 to an importer in Argentina. The Argentine importer is unable to furnish the exporter with a letter of credit on his bank because of a lack of such facilities in his locality, and the New York exporter consequently draws a sight draft for \$10,000 directly on the

⁴ For a complete discussion of this instrument, see Frederick, K. T., *The Trust Receipt as Security*.

importer. He then ships the goods, attaches the documents to the sight draft, and turns it over to his New York bank for collection. Since the draft is drawn at sight, it is payable by the importer upon presentation. There is, however, a considerable period involved in the receipt of payment by the exporter, since the draft must be mailed by his New York bank to a correspondent bank in, say, Buenos Aires, presented for payment by the Buenos Aires bank to the importer, and the payment remitted to the New York bank which is making the collection.

If the exporter is not in immediate need of funds, he may simply await the collection of the draft, in which case no bank acceptance will be used. If, however, the exporter needs funds at once, he may arrange with his bank to draw a draft on it of approximately the amount of the draft on the Argentine importer. The draft would be drawn upon the exporter's bank at, say, sixty days sight, accepted by the latter, and sold in the acceptance market, the proceeds of the sale furnishing the exporter with immediate funds. Meanwhile, the exporter's bank is protected by the documentary sight draft upon the Argentine importer. The proceeds from the payment of that draft, when remitted to the New York bank, will furnish the funds with which to pay the acceptance which has been made for the New York exporter. This type of transaction is graphically pictured in Figure 16.

American bank acceptances may arise out of export transactions in another fashion. The foreign importer may agree to furnish the American exporter with a letter of credit on an American bank. In such an instance, the foreign importer goes to his own bank which procures for him a letter of credit on its New York correspondent. The letter of credit is then sent to the exporter who draws a draft on the New York correspondent of the importer's bank, attaches the shipping documents, and sells it to his own bank. His bank presents it for acceptance, turns over the documents to the accepting bank, and sells the acceptance in the market. The New York correspondent of the importer's bank (the accepting bank) sends the documents immediately to the bank of the importer, so that they may be turned over to the importer to

Guaranty Trust Company of New York

Foreign Department

Letter of Credit No.

New York,

Gentlemen

We hereby establish our irrevocable ~~CREDIT~~ in your favor for account of

available by your drafts drawn at

on the

Guaranty Trust Company of New York, New York

for any sum or sums not exceeding a total of

accompanied by commercial invoice, consular invoice, ~~ocean~~ bills of lading

evidencing

shipment of

Insurance

Ocean Bills of Lading must be drawn to the order of

The amount of each draft negotiated, with the date of negotiation, must be endorsed hereon.

All drafts drawn under this Credit should bear the clause "drawn under G. T. Co. of N. Y. Letter of Credit
No. dated New York,

We hereby agree with bona fide holders that all drafts drawn by virtue of this Credit, and in accordance with the above stipulated terms, shall meet with due honor upon presentation and delivery of documents as specified to the Guaranty Trust Company of New York, New York, if drawn and negotiated on or before

Yours Respectfully,

FIG. 14 (a). LETTER OF CREDIT (AGREEMENT)

Guaranty Trust Company of New York

Gentlemen:

In consideration of the issuance by you of your Letter of Credit No. _____, of which a true copy is on the other side, the undersigned hereby agree to its terms and jointly and severally promise and agree as follows:

1. To provide you or your agent at least one day prior to the maturity of any bills drawn under said Letter of Credit or drafts and/or other instruments drawn in renewal thereof, with funds in New York to the amount thereof, or if any such bills shall be drawn payable at sight, then to provide such funds immediately upon receipt of notice of payment thereof, in either event, together with interest, commission of _____ per cent., and all expenses, and sundry charges, all payments to be made to you in New York City, in United States Gold.

2. The undersigned undertake to insure against all risks all the goods and merchandise shipped under said credits, in companies and forms satisfactory to and approved by you, such policies to be so drawn or so assigned or endorsed that all loss occurring thereunder shall be payable to you and to be delivered to you, and notwithstanding any such approval the undersigned assume all responsibility as to the sufficiency and genuineness of the insurance and the solvency and responsibility of the insurers.

3. The undersigned agree that the title to all property which shall be purchased or shipped under or by virtue of said Letter of Credit, the bills of lading and all evidences of title or possession or other documents relating thereto, the policies of insurance and the proceeds thereof, shall be and remain absolutely in you until payment of the bills above referred to and any and all other sums of money payable on said bills or otherwise and until due payment of any and all other indebtedness now existing or hereafter created or incurred by the undersigned to you in respect of any and all other transactions heretofore or hereafter had with you.

4. Should the market value in New York of the merchandise or goods shipped under said Letter of Credit either before or after its arrival fall so that in your estimation the proceeds thereof, after deducting freight, duties and all other charges will be insufficient to cover your advance there against with commission and interest, the undersigned promise and agree to give you on demand such further security, satisfactory to you in form and amount, as you may require.

5. Goods and merchandise imported under said credit shall be paid for, or at your option security approved by you shall be lodged with you before the undersigned shall be entitled to the surrender or delivery of the documents in respect thereof, which security may be retained and held by you until payment of all moneys heretofore referred to and as security for which you are entitled to hold the said documents, and in the event that you may entrust the undersigned with any of the said goods or merchandise for the purpose of sale, the undersigned consent that you may at any time, in your discretion, repossess yourselves of said goods and merchandise.

6. The undersigned agree from time to time upon your demand to deliver, convey and transfer to you as security for all indebtedness or liability of the undersigned to you at any time existing under this agreement or otherwise, collateral security of a value and character satisfactory to you, and that you or your agent may hold any goods, merchandise, moneys, deposits or other securities of any kind and nature in your possession or under your control as security for all indebtedness or liability of the undersigned to you.

7. In the event of any default in payment of any moneys due and owing to you, or in default in the due observance and performance of any matter or thing herein provided for, or in the event of any suspension, failure, assignment for the benefit of creditors, the filing of any petition in bankruptcy by or against the undersigned or the appointment of any receiver of the property of the undersigned, then and in any such event, the whole of the said moneys owing to you by the undersigned shall at once, without any demand, become due and be payable. Thereupon, you or your agent are authorized, without previous demand, to sell the whole or any part of the said goods and merchandise, shipped or to be shipped under said Letter of Credit, or sell the same "to arrive," and may also sell without notice of any kind any or all securities deposited with you at public or private sale, applying the proceeds, less the costs and expenses of such sale and any other expenses paid or incurred in respect of said goods, in and towards any indebtedness of the undersigned to you, paying the surplus to the undersigned. If any deficiency shall arise, the undersigned will pay the same to you on demand. At any such sale you may become the purchaser and hold the goods or security, free of any right of redemption.

8. The undersigned agree (agree) that should the beneficiary under said Letter of Credit, upon receipt of advice by cable, or otherwise, of the issuance of said Letter of Credit, but prior to its actual receipt, negotiate drafts by virtue of such advice, such negotiation shall be considered a proper one and shall be included under the terms and subject to all conditions hereof, and in addition thereto the undersigned assume all the risk of the misuse of the said Letter of Credit, and further agree that neither you nor your correspondents shall be held responsible for the correctness, genuineness or validity of any documents provided for or mentioned in said Letter of Credit, or for any fraud, error or falsity therein, or for the description or mis-description, quantity or quality, of the property represented thereby, or purporting so to be, nor for the breach of any contract between the users of the Letter of Credit and the undersigned, nor for any error, interruption or delay in cabling at the request of the undersigned in connection with said Letter of Credit or any transaction thereunder, and that the same shall not be a defense against any obligation under this agreement, and the undersigned will indemnify and save you harmless from all loss and liability, however arising, from or in connection with the said Letter of Credit.

9. The undersigned further agree that the date of any bill of lading shall be conclusive evidence that the goods therein referred to were actually shipped on or before such date, and that unless the terms of said credit specifically require "on board" bills of lading, the term "received for shipment" shall for the purpose of the said credit be equivalent to "shipped" or "shipped on board" and shall be conclusive evidence for the purpose of this credit that such goods were shipped on the vessel named in such bill of lading.

10. In case the undersigned consent to any overdrafts under said Letter of Credit or authorize payment or acceptance of drafts drawn thereunder with irregular documents attached thereto, or authorize or consent to any departure from the terms of the Letter of Credit, this agreement shall be fully binding upon the undersigned in respect to such overdrafts, and notwithstanding such overdrafts, irregularities or variances, this agreement and your title to the documents, merchandise and insurance policies shall be, subsist and remain as though all matters had been done in strict compliance with said Letter of Credit.

11. The obligations of the undersigned and all of your rights under this Letter of Credit or the provisions of any trust receipt issued in connection herewith shall be extended for the full period of any drafts or acceptances issued in renewal or extension of any drafts or bills drawn hereunder and shall continue until full payment thereof has been made, whether the obligors and drawers under such extension or renewal drafts shall be the same as under prior bills or drafts or otherwise.

12. This obligation is to remain in force and be applicable to all transactions, notwithstanding any change in the composition of any firm or firms, parties to this contract, or users of this credit, whether such change shall arise from the accession of one or more partners or from the death or secession of any partner or partners.

FIG. 14 (b). LETTER OF CREDIT (AGREEMENT)

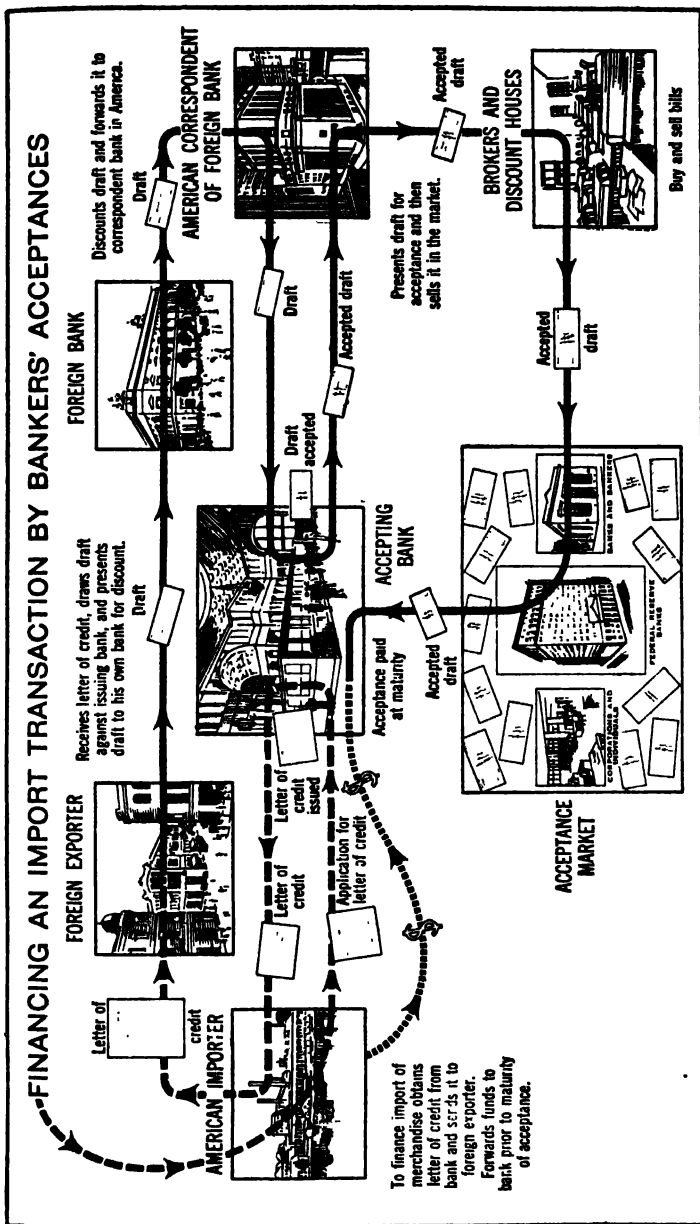


FIG. 15
 (Courtesy of the Federal Reserve Bank of Philadelphia)

enable him to get possession of the goods. Before the acceptance comes due, the foreign importer will furnish his bank with sufficient domestic currency to buy a dollar draft for the amount of the bill. This dollar draft is then forwarded by the importer's bank to its New York correspondent in time to furnish the latter with funds to pay the acceptance when it is presented at maturity.

Goods shipped between foreign countries.—The American acceptance market has, in the last few years, financed a large number of transactions arising out of the shipment of goods between foreign countries. To illustrate the nature of this sort of transaction, suppose a German exporter to be shipping a bill of goods to a Brazilian importer. The importer wants ninety days in which to pay for the goods, but his credit standing is not well enough known to the exporter to induce the latter to draw a D. A. draft against him.

Without the required time in which to dispose of the goods, the Brazilian importer would be unable, presumably, to make the purchase. He therefore applies at his bank for a letter of credit on his bank's correspondent in New York. If the application is granted, the letter of credit will be issued authorizing the German exporter to draw on a specified New York bank (the Brazilian bank's correspondent) up to a stipulated number of dollars at ninety days sight.

The letter of credit is forwarded to the German exporter who then ships the goods, draws a draft upon the New York bank, attaches the shipping documents thereto, and sells the draft to his own bank in Germany at the prevailing rate of exchange for that type of draft on New York. The exporter receives his payment in marks and drops out of the transaction.

The German bank forwards the draft and documents to its New York correspondent to be presented for acceptance. Upon acceptance the draft is discounted in the market and the proceeds are credited to the account of the German bank in its New York correspondent bank. The German bank is then out of the transaction.

The New York correspondent of the Brazilian bank, when it accepted the draft drawn on it by the German exporter, obtained the documents giving it control of the goods. The

FINANCING AN EXPORT TRANSACTION BY BANKERS' ACCEPTANCES

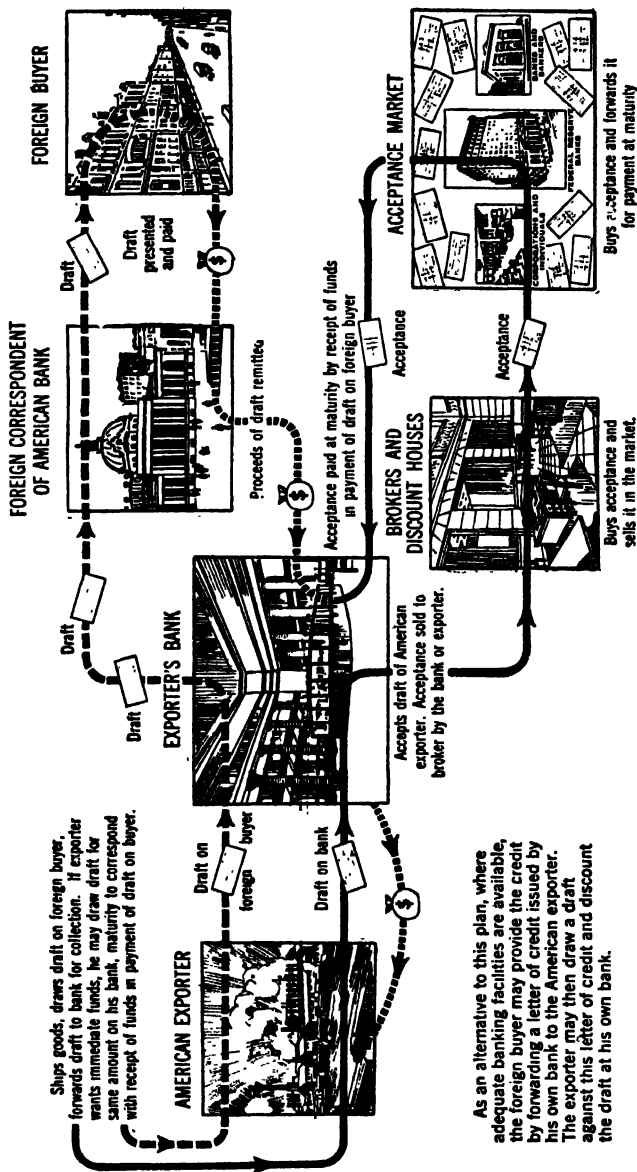


FIG. 16

(Courtesy of the Federal Reserve Bank of Philadelphia)

goods themselves, however, have been shipped to Brazil, so that it is necessary for the New York bank to send the documents immediately to its Brazilian correspondent. The Brazilian bank, upon receipt of the documents from New York, arranges to turn them over to the importer, so that he may obtain and sell the goods. Some time before the acceptance matures in New York the Brazilian importer will furnish his bank with enough *milreis* to buy a dollar draft covering the amount of the acceptance. This dollar draft or check is forwarded by the Brazilian banker to his New York correspondent in time to furnish the latter with cover for the maturing acceptance.

Staple products stored in foreign countries also furnish the basis for a considerable number of American bank acceptances. The foreign importer arranges with his bank to draw a draft upon its American correspondent. The sale of the draft puts the importer in funds to carry the stored staple pending its marketing. The American bank on which the draft is drawn is protected by the warehouse receipt for the stored goods. The subsequent sale of the goods furnishes the funds to provide the American bank with cover for the acceptance upon its maturity.

Dollar exchange. — The manner in which foreign bankers may draw drafts on New York banks for the purpose of creating dollar exchange is clearly illustrated by the following example as given by Mr. Wilbert Ward :⁵

“A steamer from the United States arrives at a Central American port with cargo and mail, including documentary sight dollar drafts drawn by the American sellers on the Central American buyers. In the course of a day or two these documentary drafts are presented, simultaneously bringing all the drawees into the exchange market as buyers of dollars. The total of their requirements is likely to exceed the supply of dollar exchange which local bankers have accumulated from local exporters of products to the United States, or otherwise, and which are either already available as dollar deposits in accounts with bankers in the United States, or else in course of transit for collection and credit to these accounts. If these drawees must compete for the

⁵ *Bank Credits and Acceptances*, pp. 261-262.

inadequate supply of dollars on hand, it is obvious that the result will be a sharp rise in the cost of dollar exchange without any augmentation of the supply, to the detriment of all, and naturally also to the detriment of further trade with the United States. If the local banks have, however, arranged acceptance credit facilities with their United States correspondents, the situation is simplified. They can sell their dollar cheques on the United States to the drawees, thus furnishing them with funds with which to take up the trade drafts, and they can simultaneously draw for equivalent sums at ninety days sight on their American bank correspondents. The cheques and time drafts will arrive here in the same mail. The time drafts will be immediately accepted and discounted and the proceeds credited to the accounts of the Central American banks and thus utilized to cover the cheques. During the ninety days that will elapse before the time drafts mature, the Central American banks can as opportunity affords, and without forcing the market, accumulate and remit the dollar exchange with which to pay the drafts when presented for payment."

The drafts drawn by the Central American bankers against their United States correspondents were drawn for the purpose of creating dollar exchange—i.e., dollar deposits—so that their dollar checks, sold to the Central American importers, would be covered when presented in this country for encashment. Not all foreign bankers, however, are permitted to draw such drafts on American banks. The Federal Reserve Board "has designated the following countries whose usages of trade require the furnishing of dollar exchange, so that member banks may accept drafts drawn upon them by banks or bankers in such countries: Australia, New Zealand, and other Australasian dependencies; Argentina, Bolivia, Brazil, British Guiana, British Honduras, Chile, Colombia, Costa Rica, Cuba, Dutch East Indies, Dutch Guiana, Ecuador, French Guiana, French West Indies, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, Porto Rico, San Salvador, Santo Domingo, Trinidad, Uruguay, and Venezuela."⁶

It will be noted from this list that American member

⁶ *Digest of Rulings*, Federal Reserve Board, 1928 edition, p. 83.

banks are permitted to accept drafts drawn on them by banks only of those countries whose trade with the United States is more or less irregular or sporadic. Banks in those countries with which the United States has well-developed trade relations are excluded from the list. The reason for this discrimination is to be found in the fact that drafts of this character are clean bills representing no underlying transaction, but which are nevertheless necessary to encourage satisfactory trade relations with the countries listed. "This relaxation of the visible contact between the acceptance and the mercantile transaction is, however, in no sense intended to countenance the creation of 'finance bills,' drawn virtually for the purpose of procuring a loan from the American money market"⁷ for financial rather than for trade purposes. Consequently, the use of this type of draft is closely restricted.

The significance of an active acceptance market.—The importance of an active acceptance market in connection with the financing of foreign trade transactions has been made clear by the foregoing illustrations. In each example, an acceptance was discounted in the market and the purchaser of the acceptance furnished the funds by means of which the transaction was financed. Moreover, the necessity of being sure that the acceptance would be purchased in every instance has been amply demonstrated. When an American importer furnishes a French exporter with a letter of credit on his New York bank, the exporter is able to sell the draft drawn under the letter of credit to his own banker only because the latter knows that when the draft is sent over to New York and accepted it can be discounted in the New York bill market, so that his New York account may be credited with the proceeds. Likewise, in each of the other typical transactions reviewed in this chapter, immediate sale of the accepted draft was essential. Without the assurance that acceptances could always be sold at once American banks could not participate as they now do in foreign trade financing.

The American and other discount markets.—We have been concerned in this chapter with the financing of inter-

⁷ Ward, W., *op. cit.*, pp. 259-260.

national trade through the use of American bank acceptances. It is quite possible to finance foreign transactions through the London or other markets, however, and whether the financing will be done through this or that market depends, aside from the existence of adequate facilities which are of course essential, upon the relative discount rates prevailing in the different markets. But before the significance of differences in discount rates as a moving factor can be thoroughly understood, it will be necessary to describe more fully the forces underlying the various rates of exchange which are quoted in the foreign exchange market. Accordingly, the following chapter will be devoted to a discussion of rates of exchange.

REFERENCES

(The following references are for Chapters XV and XVI)

- Clare, G. and Crump, N. *The A B C of the Foreign Exchanges*. London (Eighth Edition). 1927.
- Cross, I. B. *Domestic and Foreign Exchange*. New York. 1923.
- Docker, F. J. *Foreign Exchange*. London. 1940.
- Einzig, P. *International Gold Movements*. London. 1929.
- Einzig, P. *Exchange Control*. New York. 1934.
- Eldridge, F. R. *Financing Export Shipments*. New York. 1930.
- Escher, F. *Foreign Exchange Explained*. New York. 1917.
- Escher, F. *Modern Foreign Exchange*. New York. 1932.
- Furniss, E. S. *Foreign Exchange*. Boston. 1922.
- Miller, H. F. R. *The Foreign Exchange Market*. London (Second Edition). 1929.
- Southard, F. A. and Others. *Foreign Exchange Policy and Practice*. New York. 1940.
- Towers, G. F. *Financing Foreign Trade*. Montreal. 1927.
- Ward, W. *Bank Credits and Acceptances*. New York. 1931.
- Whitaker, A. C. *Foreign Exchange*. New York (Revised Edition). 1933.
- Young, J. P. *International Trade and Finance*. New York. 1938.

CHAPTER XVI

RATES OF EXCHANGE

Introductory note.—The financing of foreign trade by means of the banker's acceptance, as described in the previous chapter, has not altered sufficiently under present disturbed conditions to require any special qualifications. Such is not the case with the present chapter dealing with rates of exchange. Since 1933, practically all of the world's leading countries have been off the gold standard. New expedients, such as stabilization funds and exchange controls, have been adopted to try to maintain a fair degree of stability in exchange rates, with varying degrees of success. In any event, conditions in the foreign exchange market are far from normal, and the question arises as to whether to try to depict the present unusual state of affairs or to set forth the situation which existed prior to 1933 when more normal conditions prevailed. In the following pages the present writer has elected the latter alternative as, perhaps, the lesser of two evils. The outcome of the conflict in Europe may result in new arrangements of a permanent character. But what they will be cannot be forecast with any accuracy. On the whole, then, it seems better to confine the bulk of the succeeding discussion to the practices which prevailed earlier while leading countries were on the gold standard. It seems desirable, however, to warn the reader that this is the case. It should be remembered that the discussion in the succeeding pages applies to the period prior to 1932, when the international gold standard was in operation.

Payments in foreign trade.—One of the complicating factors in foreign trade is that payments must often be effected in the money of some foreign country which has a different monetary unit from that employed in domestic transactions. In some instances, of course, two countries will have the same unit, as the United States and Canada, both of which have the

gold dollar as a standard. Business and financial transactions between two such countries are accordingly simplified. In the majority of cases, however, different money units are used, and it is hence necessary to translate the prices of goods in one country into the prices in another money unit before exchanges can be effected. This is accomplished in practice by reference to the existing rates of exchange on various foreign countries.

The rate of exchange on a foreign country is merely the price of the right to claim a unit of the foreign country's money in that country. More specifically, the rate of exchange in New York on London is the price in dollars and cents of the right to claim a pound sterling in London.

The market for foreign exchange.—Obviously, if people are to be able to buy foreign exchange in New York, there must exist there dealers who have funds in foreign countries which they are ready to sell for dollars and cents. These dealers, as indicated in the preceding chapter, are the foreign exchange bankers or the foreign departments of the large New York banks and banking houses.

The market for foreign exchange is, then, similar to any competitive market. It consists of a group of competing buyers—those having payments to make in foreign countries—and another group of competing sellers—those having possession of funds in foreign countries with which the payments in question may be made. Competition among the buyers, on the one hand, and among the sellers, on the other, fixes the prices which will have to be paid for claims to various foreign moneys. Since the price of such claims constitutes the rate of exchange on the foreign country in question, it is necessary to examine carefully the forces which determine both the demand for and supply of foreign exchange.

The supply of exchange.—In order to avoid as many complications as possible, we shall confine our attention to the rate of exchange on some particular country, and the rate on England—the price in New York of claims to pounds sterling in London—will be used for this purpose.

In addition, also for the sake of simplicity, we shall assume both England and the United States to be on the gold

standard. The supply of English exchange at any time consists of the total of deposits which American foreign exchange bankers have to their credit in English banks. This supply is decreased every time a foreign exchange banker sells a check against his English account, so that it is necessary for him to replenish this account regularly if he is to continue doing business.

There are a number of ways in which the foreign exchange banker may build up his account in England. First, he may ship gold to the English banker who will accept it by weight and credit his account with the appropriate number of pounds. Second, he may transfer funds from an account in another center, such as Paris, to his English banker at the current rate of exchange in Paris on London. Third, he may buy drafts or checks drawn on English banks which have been sent to American exporters by other than English importers who have arranged to pay their debts in London exchange. Finally, he may buy claims to payment in pounds from American exporters to England, send these over for collection, and have the proceeds credited to his English account.

The first two methods are used only upon occasion when rates of exchange are such as to make them profitable and will receive attention at a later point. With the development of New York as an important international financial center, the third method of obtaining English funds is less common than formerly. It is, accordingly, the fourth method which is most widely used by the foreign exchange banker in building up his English deposit.

Different rates of exchange on London.—Although mention has been made of "*the* rate of exchange" on London or England, there are, in fact, a number of rates. These are shown for September 30, 1929, in the following table:¹

Bankers' Bills

Sight	4.84875 @	4.85500
Cable transfers	4.85500 @	4.86063

¹ From the *Bank and Quotation Record* (W. B. Dana Company, New York), Oct. 11, 1929.

Commercial Bills

Sight	4.84688 @	4.85250
Sixty-day		4.79500
Ninety-day	4.77000 @	4.77250
D/P-sixty days	4.79000 @	4.79500
Seven-day grain		4.84063

It will be observed that the various rates quoted are divided into two groups, rates on bankers' bills and rates on commercial bills. The former are selling prices at which the foreign exchange banker disposes of his English funds, while the latter are buying prices at which he obtains a new supply of funds in England.

The spread between rates.—There are thus two selling prices and five buying prices here listed for exchange on London, and it becomes necessary to explain the spread which prevails between these different rates. This may best be done by reference, first, to the bankers' sight and the commercial sight rates.

The bankers' sight rate is the price per pound of checks on the banker's London account. Brown, let us say, has a debt of £5000 to meet in England in two weeks, Anderson & Son being the English creditor. Brown goes to his bank in New York and buys a check for £5000 drawn by the bank on its London account and made payable to the order of Anderson & Son. For this he will have to pay the bankers' sight rate.² Having obtained the check, Brown will mail it to Anderson & Son, and in the course of some ten days it will be received by the latter and presented at the bank for deposit or payment.

Suppose, however, that Brown is not in a position to pay his debt until the day before it comes due, and must hence arrange to have £5000 paid to Anderson & Son at once. In this eventuality, he will be forced to buy a cable transfer from his bank. That is, the bank will be instructed by Brown to send a cable to its London correspondent directing the latter to pay to Anderson & Son or order the sum of £5000. The whole transaction in this case will be consummated immediately.

² The table gives \$4.84875 @ \$4.85500 for this rate. This represents the range between the high and low rates for the day, and what Brown will have to pay depends upon the rate quoted at the time he makes his purchase.

The spread between cables and bankers' sight bills.—Clearly, there is a considerable difference in the two types of transaction just described. If Brown buys a bankers' sight bill or check, it has to be sent to Anderson & Son by mail, and it will necessarily be ten days or so before the draft is presented for payment and the London account of Brown's bank debited. When a cable transfer is used, on the other hand, the New York bank's London account is debited the same day, so that approximately ten days' interest is lost. The foreign exchange banker accordingly charges a rate for cable transfers which is enough higher than the sight rate to cover the loss of interest involved.

Bankers' sight and commercial sight rates.—The commercial sight rate is the rate paid by the foreign exchange banker for commercial drafts which are drawn by Americans upon English debtors and which are payable by these debtors upon presentation in England. When an American banker buys such a draft, he immediately sends it to his English correspondent who presents it for payment and credits the proceeds to the American banker's account. The process of mailing such a draft to England and having it collected requires about ten days' time. When an American debtor buys a bankers' sight draft and sends it over to an English creditor, the time involved before the draft is presented to the English bank for payment is likewise about ten days. Consequently, the American banker who purchases commercial sight drafts drawn upon English debtors may, *at the same time*, sell his own drafts in like amount to Americans having payments to make in England. The two sets of drafts will arrive in England at the same time and the funds obtained from the collection of the commercial drafts will furnish cover for the American banker's own sight drafts which he has sold to American debtors.

It is therefore apparent that there is no loss of interest involved when such drafts (commercial sight) are purchased. Nor is the banker entering into any speculative commitment in making such a purchase since he may at the same time sell his own check for a like number of pounds. The difference between the bankers' sight and the commercial sight rates accordingly represents merely the profit that the foreign

exchange banker makes on a given sale of funds in London. As shown in the table, this profit usually amounts to about $\frac{1}{4}$ cent per pound.

The spread between the bankers' sight and other commercial rates.—The spread between the bankers' sight rate and the rates on various types of commercial time drafts is largely a function of the maturity of the time drafts together with the rate of discount prevailing in the London money market. On the date for which the quotations in the preceding table are given (September 30, 1929), the rate of discount in the London acceptance market was quoted at $6\frac{1}{4}$ @ $6\frac{5}{16}$ per cent on prime ninety-day bills. With a bankers' sight rate of \$4.855, assuming that a prime bill can be discounted in the London market at $6\frac{1}{4}$ per cent, and bearing in mind that three days of grace are allowed in England in which to pay matured bills, the rate which an American foreign exchange banker would be willing to pay for a ninety-day D. A. bill for £1000 would be calculated approximately as follows :

Banker's sight rate	\$4.8550
93 days' discount at $6\frac{1}{4}$ per cent . . . . .	.0773
	<hr/>
	\$4.7777

From this the banker must also deduct a stamp tax of 10s. which amounts to $\frac{1}{20}$ of 1 per cent on a £1000 bill, or \$0.002426. This reduces the rate to \$4.7753, which makes no allowance for a profit to the foreign exchange banker. Assuming a profit of one-fourth of a cent on the pound and subtracting this amount, a rate of \$4.7728 is obtained. This approximates very closely the highest quoted rate in the table for ninety-day bills.⁸

In the preceding calculation, a specific rate of discount— $6\frac{1}{4}$ per cent—was used. It would appear that, if the rate in the London market should rise or fall between the time that the American banker buys the bill and the time it is discounted in the London market a week to ten days later, the

⁸ The slight discrepancy between the calculated and the quoted rate may be due to the fact that the English banker extracts a slight commission for handling the transaction, or that the London discount rate on which the calculation was based was $6\frac{5}{16}$ instead of $6\frac{1}{4}$ per cent, or some combination of these and other factors.

banker would lose or gain accordingly. Actually, however, the London foreign exchange bankers furnish their American correspondents daily with an arrival rate of discount. This is the rate at which the British bankers agree to discount bills purchased by American correspondents on a specific date, regardless of what rate may prevail in the London market when the bills actually arrive there. The American foreign exchange banker, accordingly, is able to calculate an exact rate for time bills without making any speculative commitment whatsoever.

As would be expected from the foregoing explanation, the table indicates that the longer the maturity of the bill, the lower is the price per pound which the banker will pay for it. Thus the rate is higher for sixty-day than for ninety-day bills, and still higher for seven-day grain bills. As D. P. bills cannot be discounted in the London market, the rate on such bills is usually slightly lower than on D. A. bills of the same maturity, although when a banker knows from experience that D. P. bills on certain drawees will be taken up before maturity a better rate may be offered.

Since the chief item involved in the spread between the commercial rates and the bankers' sight rate is the discount rate in the London market, it is clear that changes in the latter rate are of considerable importance in determining the cost of financing through London. To illustrate, the rate of discount on ninety-day bills in the London market on April 16, 1931, was $2\frac{5}{8}$ per cent. On the same date the bankers' sight rate in New York on London stood at \$4.85656 while the buying rate on ninety-day bills (prime commercial) was \$4.82188. The spread between these two rates was accordingly \$0.03468 per pound as compared with a spread of from \$0.07875 to \$0.08250 per pound on September 30, 1929, when the discount rate in the London market stood at $6\frac{1}{4}$ @ $6\frac{5}{16}$ per cent.

The basic rate of exchange.—Of the rates which have been discussed, the bankers' sight rate is fundamental or basic. It is the rate which is meant when referring to "the rate of exchange" on any foreign country. The reason for this has already been implied. When the foreign exchange banker buys commercial bills drawn on Englishmen, he is purchasing

claims to funds in England against which he can sell his own drafts at the same time without losing interest or making any speculative commitment, since the funds obtained from the collection or discount of the commercial bills will furnish cover for his own drafts.

The cable rate, on the other hand, as well as the rates on commercial bills, is fixed in relation to the bankers' sight rate. If the bankers' sight rate rises, all the other rates will rise in proportion, assuming no change to have occurred in the London discount rate. The bankers' sight rate also, as will be shown shortly, is the rate which governs gold movements from one country to another. Accordingly, although some authorities have maintained that the cable rate was fundamental, it seems clear that the bankers' sight rate is really the basic rate of exchange.

The supply of bills.—Four methods by which the foreign exchange banker may increase his supply of funds abroad have been noted in an earlier paragraph, and it was there pointed out that the most important of these was the purchase of bills from those who had claims to payment in foreign countries. It must be emphasized in this connection that such bills may arise out of a wide variety of international commercial and financial transactions. Any payment which is due to Americans from foreigners has the effect of increasing the supply of foreign exchange.⁴ Thus the payment for services rendered by Americans, the payment of interest or dividends on American-held foreign securities, etc., tend to increase the supply of exchange in the same fashion as the payment for commodities purchased. The following list gives the chief sources of the supply of claims against foreigners. In every instance, it will be noted, a payment must be made by the foreigner to someone in this country.

1. Exports of commodities
2. Sales abroad of American securities
3. Payment of interest or dividends on American held foreign securities
4. Short-time loans placed by foreigners in the American money market
5. Shipping, insurance, and other services furnished by Americans to foreigners

⁴ But see pp. 336-337.

6. Repayment of debts to Americans
7. Foreign tourist expenditures in the United States
8. Remittances by foreigners to friends or relatives in America

The demand for exchange.—The demand for foreign funds, on the other hand, occurs whenever Americans have payments to make in foreign countries. In general, the transactions which give rise to a demand for foreign exchange are just the reverse of those effecting an increase in the supply. They may be listed as follows :

1. Imports of commodities
2. Purchase of foreign securities
3. Payment of interest or dividends on foreign-held American securities
4. Short-time loans placed in foreign money markets
5. Shipping, insurance, and other services furnished by foreigners to us
6. Repayment of debts to foreigners
7. American tourist expenditures in foreign countries
8. Remittances by immigrants and others to foreign friends or relatives

Qualification of preceding explanation.—From the foregoing explanation it would appear that every payment from Americans to foreigners would tend to raise the rate of exchange by decreasing the American foreign exchange bankers' supply of funds abroad and that every payment by foreigners to American would tend to lower the rate by increasing the supply of funds abroad. As far as the effect of such payments on the rate of exchange is concerned, this is precisely what happens. It may be, however, that payments by, say, Englishmen to Americans may affect the rate of exchange by decreasing the supply of English balances in the United States instead of by increasing the American bankers' supply of funds in England.

To illustrate this point, suppose a considerable amount of payments to this country to be made by English debtors by the purchase in London of dollar drafts drawn by London bankers against their New York accounts. These dollar drafts would be sent over to the American creditors and would be collected from the New York banks holding the

English balances. This would decrease the English bankers' supply of dollar exchange and would tend to raise the rate of exchange *in London on New York*. A high rate of exchange in London on New York, however, is the same as a low rate of exchange in New York on London. This fact is confusing to the uninitiated and requires explanation.

The rate of exchange in London on New York is quoted in dollars and cents per pound and is accordingly exactly the same in both centers. But a rate of \$4.84 in London is a high rate, because it means that English buyers of dollars can get less dollars and cents per pound than would be the case if the rate were \$4.88. Stated differently, an Englishman wishing to purchase a dollar draft for \$5000 at a rate of \$4.84 would have to pay approximately £1033 for it, whereas, if the rate were \$4.88, it would cost him a little less than £1025. To the American who is buying pounds, on the other hand, a rate of \$4.84 is lower than a rate of \$4.88.

To the extent, then, that payments to Americans are made by Englishmen (or other foreigners) in dollars, the effect will be to lower the rate in New York on the foreign country through decreasing the foreign balances held in New York instead of through increasing the foreign balances of American bankers. In any event, however the payment may be made, the effect of payments to us by foreigners is to lower the rate of exchange on the foreign country, while payments by us to foreigners have the opposite effect.

Limits to exchange rate movements.—Although variations in the supply of and demand for funds abroad are the immediate cause of changes in the exchange rates on foreign countries, the range of fluctuation of the rate of exchange on any particular country is sharply limited by the cost of shipping gold. To take a specific example, the rate of exchange in New York on London will vary only between the limits fixed by the cost of shipping gold from New York to London or from London to New York.

Consider first the conditions under which gold will be exported from this country to England. Suppose the demand for sterling exchange to have been active with a comparatively small supply of bills on England coming into the

market. With the demand in excess of the supply at the rate prevailing earlier, the rate of exchange on London would have to rise in order to equalize the demand for and supply of funds in England at a higher rate. This increase in the rate for sterling exchange, if it brings no additional supply of bills into the market, will continue until the rate reaches a point at which it will be profitable to ship gold to England.

For purposes of illustration, let us assume that the cost of shipping gold to London from New York amounts to two cents per pound sterling. The mint par of exchange on England, as determined by the relative amounts of fine gold in the pound and the dollar, is \$4.8665.⁵ To get the amount of gold contained in a pound will cost the banker \$4.8665. Assuming that the foreign exchange banker operates on a profit of $\frac{1}{4}$ cent per pound, it would be profitable for him to ship gold when the bankers' sight rate reaches \$4.8890 (\$4.8865 + .0025). Viewed from a slightly different angle, he would not offer more for bills or claims against England than a price which is the equivalent of \$4.8865 after such bills have been sent over to England and discounted, for it would be cheaper to ship gold than to pay a higher price than that mentioned for bills.

The conditions surrounding the importation of gold are practically the opposite of those just described in connection with gold exports. Again assuming a figure of two cents to cover the cost per pound of shipping gold, the net amount in dollars and cents obtained by the importing American banker would be \$4.8465 per pound (\$4.8665 — .0200). Since the foreign exchange banker can also obtain dollars through the sale of his sight drafts—on which he makes a profit of, say, $\frac{1}{4}$ cent per pound—it would clearly not be profitable to import gold as long as the bankers' sight rate remains above \$4.8440 (\$4.8465 — .0025). On the other hand, it would not be profitable for the banker to sell sight drafts at any figure below \$4.8440, since gold could be imported at a profit of $\frac{1}{4}$ cent per pound when the rate reached that point.

⁵ The pound contained 113.0015 grains of fine gold as compared with 23.22 grains in the dollar before 1932. Thus the amount of gold in the pound was $113.0015 \div 23.22 = 4.86656$ times the amount in the dollar.

Variations in the cost of shipping gold.—In the foregoing examples it has been assumed that the cost per pound of exporting gold to England or of importing gold from England was exactly two cents. Actually, such an assumption is not justified. The cost of shipping gold is an aggregate of a number of costs, practically all of which are more or less variable. The chief costs which enter into gold shipments are those of assaying, packing, freight, insurance, and interest. The first two of these are normally fairly steady, but freight and insurance may vary considerably from time to time, while interest rates are also subject to rather wide, and at times rapid, fluctuations.

To show the extent to which changes in these costs may effect changes in the gold export or import points, the following calculations by Dr. Paul Einzig are presented :⁶

	<i>Gold Import Point</i>	<i>Gold Export Point</i>
1913	\$4.8509	\$4.8900
1925	4.8491	4.8949
1928	4.8515	4.8884

From these calculations it is apparent that there has been a tendency for the spread between the gold points to narrow somewhat since England's return to the gold standard in 1925. In January 1930, the spread between the theoretical gold points, as calculated by the Federal Reserve Bank of New York, was slightly smaller than that computed by Einzig for the end of 1928.⁷ Apparently, a cost of somewhere near 1½ cents per pound for shipping gold between New York and London may be considered about normal under conditions just prior to 1932.

Variations in export and import points in relation to par.—It will be noted from Einzig's calculations that there is a wider spread between par and the gold export point than there is between par and the gold import point. This is normally the case and is explained by the fact that, whereas the buying and selling price of gold in New York were iden-

⁶ *International Gold Movements*, pp. 94-95. Since Einzig's calculations are from the standpoint of the English market, we have here reversed the figures as the English import point would be our export point and vice versa.

⁷ As nearly as can be estimated from a chart published in the *Monthly Review* of the Federal Reserve Bank of New York, March 1, 1930. The exact figures, as computed by the reserve bank, are not given.

tical at \$20.67183 per fine ounce, the Bank of England had a minimum buying price of 84s. 9.81818*d.* and a selling price of 84s. 11.45455*d.* per fine ounce. Thus gold shipped from New York to London was normally taken in London at the Bank's minimum buying price, or at a rate of \$4.87439 per pound, while gold taken for shipment from London to New York was obtained at the Bank's selling price, or at a rate of \$4.86656, the mint par.

Exceptions to this normal relationship between the gold points and par may be observed upon occasion as a result of special circumstances. An instance of this sort occurred, for example, in the closing months of 1930, continuing into 1931. For that period, the calculated theoretical gold export point stood just under \$4.88, a figure which was nearer to par than was the theoretical gold import point.⁸ This can be explained only by a buying price for fine gold bars in the London market higher than the minimum price of the Bank of England. The reason for this higher buying price was probably the fact that after May 31, 1930, the Bank of England ceased to pay out fine gold, delivering only standard gold of a fineness of 916 $\frac{2}{3}$ which required refining before it would be accepted by certain continental central banks—particularly the Bank of France—to which it was ultimately sold.⁹ Later, when the continental central banks in question altered their policy and began to accept gold of the English standard of fineness, this unusually high buying price for fine gold in London disappeared. Thereafter the theoretical gold export point resumed its normal position in relation to par.¹⁰

Significance of theoretical gold points.—Theoretical gold export and import points of the sort described may be calculated for any two gold standard countries on the basis of the current cost of shipping gold between the two countries, the buying and selling price of gold in the financial center of each country, and the prevailing rates of interest in each center. Obviously, however, such calculations

⁸ As shown in a chart in the *Monthly Review* of the Federal Reserve Bank of New York, February 1, 1931, p. 13.

⁹ See Einzig, P., *The Fight for Financial Supremacy*, pp. 110-11.

¹⁰ Since the departure of England from the gold standard on Sept. 21, 1931, the gold import point has ceased to function.

furnish merely close approximations to the points at which gold will actually be shipped. At times banks engage in gold shipments without profit for advertising or other purposes, thus bringing about the movement of gold at figures inside the calculated gold points. Again, banks may ignore loss of interest in figuring the cost of shipping gold. An American bank, which is exporting gold to England to build up its London balance, may, for example, properly omit interest from its calculations of shipping cost since drafts on London may be sold at the time the gold is shipped, the gold arriving in England simultaneously with the drafts and furnishing cover for them. On the other hand, a bank importing gold may look on the shipment as a part of its reserves and so omit interest in calculating the cost of importing gold.

In spite of the impossibility of computing an exact rate at which gold will move into or out of a country, calculated theoretical gold points are significant. By means of them it is possible for the market to judge very closely, if not exactly, the rates at which gold will be shipped and to govern its actions accordingly.

Exchange rates between gold and silver standard countries.—Exchange rate fluctuations between two countries, one of which is on a gold and one on a silver standard, are not as accurately predictable as to extent as is the case between two gold standard countries. The reason for this will be clear upon a moment's consideration. In the gold standard country, silver is a commodity and its price fluctuates in the same manner as the price of any other commodity. In the silver standard country, on the other hand, the money unit consists of a fixed weight of silver. Therefore, as the price of silver varies in the gold standard country, the cost of obtaining silver to ship to the country on the silver standard will fluctuate accordingly.

To illustrate this simply, consider a gold standard country with a gold dollar of 24 grains and a silver standard country with a silver dollar of 360 grains. Suppose, further, that the price of silver in the gold standard country is \$1.00 per ounce. Clearly, to obtain one unit of the silver standard country's money will cost 75 cents in the gold standard coun-

try. If now the price of silver in the gold standard country falls to 50 cents per ounce, the cost of one unit of the silver standard country's money will be only 37.5 cents. The rate of exchange on the silver standard country will decline in proportion since no one would pay more than 37.5 cents plus shipping costs for drafts on the silver standard country. From the point of view of the silver standard country, of course, the situation will be just the opposite, the rate on the gold standard country rising by 100 per cent as a result of the change in the value of silver relatively to gold.

Exchange rates in paper standard countries.—The exchange rates between two countries not on the gold or other metallic standard are not limited in their fluctuations by shipments of gold or other metal from one country to the other. In the short run, movements of rates in these circumstances depend upon variations in the demand for and supply of exchange and may be of rather wide amplitude. In recent years, when the paper standard has been in effect in most countries, attempts have been made to steady exchange rates, thereby preventing violent short-term fluctuations. The methods used to accomplish this have been the setting up of *stabilization* or *equalization funds* and resort to *exchange control*. The former method was used quite successfully in England from 1932 to the outbreak of the War in 1939. The British Exchange Equalization Account entered the foreign exchange market on either the demand or supply side, as the occasion might warrant, and thus managed to keep the sterling rate from fluctuating unduly. The accompanying chart (Chart III) showing, among others, the dollar-sterling rate since 1914, illustrates this fact. The extreme stability of the sterling rate during the first Great War resulted from a pegging arrangement under which J. P. Morgan & Co. bought all sterling offered at \$4.76 per pound. The rate then fluctuated widely until England returned to the gold standard in the spring of 1925. From then on until September 1931 the rate remained stable within the gold points. Another period of intense fluctuation then set in, followed by several years of comparative stability under the operation of the Exchange Equalization Account.

After the outbreak of the War in 1939 there was a sharp

CHART III

FOREIGN EXCHANGE RATES

NOON BUYING RATES IN NEW YORK FOR CABLE TRANSFERS, IN CENTS PER UNIT OF FOREIGN CURRENCY
MONTHLY AVERAGES OF DAILY FIG.



decline in the sterling rate, followed by a high degree of stability resulting from the introduction of exchange control. Exchange control is, for the most part, a central banking function and, as such, is discussed in a later chapter. Briefly, it consists of giving the central bank a monopoly in the foreign exchange market, thus enabling it to fix the rate.

Although the operation of exchange stabilization or equalization funds has undoubtedly kept foreign exchange rates from fluctuating as much as they would otherwise have done, they are not as efficient as the international gold standard in maintaining stable exchange rates.

Conclusion.—The brief survey of the foreign exchange functions of banks presented in this and the preceding chapter will serve to indicate the significance of these functions. In performing them, the banks are of great assistance to foreign trade both by extending credit for the financing of import and export transactions and by facilitating foreign payments through their exchange transactions. In developing their foreign exchange business, the banks have merely extended their functions to a wider area with resultant benefit to international trade.

Having now completed a survey of the various steps in the commercial banking process, we shall turn our attention to the problem broached at the end of Chapter XIV—the interrelation of deposits, reserves and loans both for a single bank and for the system of banks.

CHAPTER XVII

THE INTER-RELATION OF DEPOSITS, RESERVES AND LOANS

Introduction.—The inter-relation of deposits, reserves and loans presents a dual problem which may, consequently, be approached in two ways: the banking and the monetary approach. The monetary theorist, who is naturally interested in the check currency as an important type of medium of exchange, looks at commercial banking as a mechanism engaged in the creation of this form of exchange medium. The individual commercial banker, on the other hand, does not consider himself in the light of a manufacturer of currency in any sense, but rather as a lender of funds deposited with him by his customers.

At first glance, it would appear that these points of view are diametrically opposed to each other, and that, accordingly, one or the other of them must be wrong. In the present chapter we shall attempt to resolve this paradox; to demonstrate, in fact, that the conflict of views is only seeming. In short, the analysis will show that the banking approach is correct as far as the individual commercial bank is concerned, but that, for the system of banks, the monetary approach is equally well suited.

THE INDIVIDUAL BANK

The old theory.—The earlier theory with respect to the inter-relation of deposits, reserves and loans was quite different from that implied in previous chapters of this book. Instead of conceiving loans to be based on deposits, it asserted that a large part of a bank's deposits were created as a result of the loans made by the bank. To illustrate, consider a bank deeming it necessary to maintain a reserve against deposits of ten per cent, and assume the relation between deposits, reserves and loans to be as follows:

Loans and discounts.....	\$450,000	
Reserves	50,000	Deposits..... \$500,000

Suppose, now, that this bank receives a deposit of lawful money of \$50,000. In the first instance, this would alter the relation between reserves, loans, and deposits in the following manner :

Loans and discounts.....	\$450,000	
Reserves	100,000	Deposits..... \$550,000

A ten per cent reserve against deposits would now amount to \$55,000, so that it is clear that the bank is in possession of an excess or surplus reserve of \$45,000. Inasmuch as \$45,000 is ten per cent of \$450,000, the bank is in the position—to so the argument ran—to increase its loans or investments by the latter amount. If the borrowers took the proceeds of their loans in the form of credits to their deposit accounts, as is usually the case, the relationship between deposits, reserves, and loans after the new loans of \$450,000 had been granted would be shown on the statement in the following manner :

Loans and discounts... ..	\$900,000	
Reserves	100,000	Deposits .. . \$1,000,000

The reserve has here become ten per cent of deposits once more, and the bank's deposits have been increased by \$450,000 through the process of making loans of that amount.

Objections to the theory.—The weak spot in this theory is that it fails to consider what would happen to the bank's position after the loans and deposits had been increased to several times the amount of the surplus reserve, as in the foregoing example. Actually, business men borrow at the bank because they have payments to make to their creditors. They will accordingly draw checks against the credits which they have received from the bank and send these checks to their creditors in order to discharge their debts. If there were but one bank in the community, and if the community were isolated, the recipients of the checks drawn by borrowers would deposit these checks in the lending bank or present them to the lending bank for encashment in hand-to-hand money. Comparatively few of the checks would be presented for encashment, however, most of them being depos-

ited with the bank for credit to the accounts of the recipients. Thus the bank would merely debit the deposit accounts of the borrowers and credit the accounts of the recipients of the checks drawn by the borrowers.

In the circumstances just depicted, it would be possible for a bank to extend loans equal to several times the amount of its surplus reserves. As a matter of fact, however, there is more than one bank in the community or the country, so that the banker can never be sure that the checks drawn by borrowers will be redeposited in his own bank. Many, perhaps all, of them will be sent to creditors of the borrower who have accounts in other banks than the one making the loan and who will accordingly deposit the checks they have received in those other banks. When this happens, the banks receiving such checks on deposit will send them back to the lending bank for payment, and the lending bank will lose reserve funds to the full amount of these checks.

To take an extreme case, suppose a bank which regularly maintains a ten per cent reserve shows the following inter-relations of deposits, reserves, and loans on its statement :

Loans and discounts . . .	\$400,000		
Reserves . . .	54,000	Deposits	\$440,000

Since the bank has an excess reserve of \$10,000, suppose, further, that it decides to grant a loan of \$100,000 to a customer, crediting his account with that amount. The items on the preceding statement would then be changed as follows :

Loans and discounts . . .	\$500,000		
Reserves . . .	54,000	Deposits	\$540,000

Apparently the bank has acted properly, for its reserve is now ten per cent of its deposits, but this situation is only momentary. Let us assume that the borrower draws a check for the full amount of the loan, \$100,000, and sends it to a creditor who deposits it in another bank. The bank receiving the check on deposit will immediately send it back through the clearing house or collection system to the lending bank for payment. The lending bank will then be confronted with the necessity of paying a check for \$100,000 with a reserve of but \$54,000. In other words, the lending bank would need to have excess reserve funds to the full amount of the loan, in this particu-

lar instance, in order to meet the payment of the check drawn by the borrower, and upon paying the check it would lose reserve funds to the full amount of the loan.

It may be objected to this that the lending bank would not lose the full amount of the loan in reserve funds since it would have checks on other banks (exchanges for clearing) which could be used to pay the check in part or in whole. This objection, however, has no force. Exchanges for clearing, while not reserve, are items that can be turned into reserve upon collection at the clearing house. Thus, if the bank in our example had \$150,000 in exchanges for clearing, and if the borrower's check for \$100,000 were the only one presented for payment at the clearing house, the bank would have a favorable balance of \$50,000; but if the loan had not been made, its favorable balance would have been \$150,000, and its reserve would have been increased by that amount. It is accordingly quite correct to state that the bank would lose reserve funds to the full amount of the loan under the conditions assumed in the example. No matter what may be the bank's balance at the clearing house, it will be less favorable or more adverse than it would have been if the loan had not been made.¹

In a system containing numerous banks, then, it is reasonable to conclude that *to the extent that a borrower draws checks against the proceeds of his loan at the bank and to the extent that these checks are deposited in other than the lending bank*, the bank making a loan will suffer a corresponding loss of reserve funds. But, in order to arrive at the actual state of affairs, it is important to determine to what extent borrowers do check against credits received from the bank, and to what extent these checks are deposited in banks other than the one making the loan.

Professor C. A. Phillips, in an analysis of this problem, has assumed that the great bulk of the checks drawn by borrowers, perhaps 99 per cent,² would be deposited in other banks than the one making the loan, therefore the proportion of redeposited checks would be negligible; but he has estimated that the average borrower checks out only about 80 per

¹ This point has been brought out in Rodkey, R. G., *The Banking Process*, p. 41.

² *Bank Credit*, p. 38. Chapter III contains Phillips' analysis of this question.

cent of the amount borrowed and that, consequently, the lending bank does not lose reserve funds to the full amount of the loan. On the basis of these estimates, Phillips calculates that a bank maintaining a reserve of ten per cent of deposits can extend loans to the amount of \$1219.51 on the basis of a \$1000 surplus reserve without impairing its reserve ratio.³

In criticism of Professor Phillips' initial assumption, J. S. Lawrence has endeavored to show that approximately one-third of the checks drawn by borrowers are redeposited in the lending bank. Because of this factor, he estimates that an individual bank can lend as much as \$1792.19 on the basis of a \$1000 surplus reserve when maintaining a reserve ratio of ten per cent.⁴

In view of the divergent conclusions of these two writers, it will be worth while to examine with some care the position taken by each of them in order to test its reliability.⁵

The relation of the commercial borrower to his bank. — One essential factor in the analysis of the extent to which an individual bank creates deposits by making loans is a proper understanding of the relation of the commercial borrower to his bank. It is usually true that the commercial borrower is also a depositor. He maintains the bulk of his "cash"—a certain amount of which is always necessary in his business—in the form of a checking deposit with one or more banks, and it is from this bank, or these banks, that he ordinarily does his borrowing. We should expect a borrower to maintain some balance in the bank, therefore, even at a time when he is indebted to it. The lack of such a balance, or its undue attenuation, would indicate an unsound financial condition on the part of the borrower, upon the improvement of which the bank has a perfect right to insist.

The twenty per cent rule. — The fact that a business enterprise has to maintain some sort of bank balance at all times in order to preserve a sound operating position is significant in determining the importance of the so-called twenty per

³ *Ibid.*, p. 71.

⁴ "Borrowed Reserves and Bank Expansion," *Quarterly Journal of Economics*, August 1928.

⁵ The following section follows rather closely an excellent analysis by Rodkey in *The Banking Process*, Chapter XV-A.

cent rule, upon which Phillips largely bases his contention that the borrower checks out only about 80 per cent of the amount borrowed. This rule is by no means universal in application, nor can it be defined rigidly for all banks that make use of some such regulation. In the majority of cases, however, it signifies either that the bank requires its commercial borrowers to maintain *average* balances throughout the year equal to twenty per cent of the lines of credit granted to them, or that the borrowers are required to maintain average balances of twenty per cent of any amount borrowed during the life of the loan. Many banks have no such requirement, while others demand a balance of fifteen or some other per cent instead of twenty. In any event, it may be stated that, aside from a few unimportant and sporadic instances, the twenty per cent rule, as described above, represents as severe a requirement as will be found in application among banks in the United States.

Forced balances.—In order to determine whether the application of the twenty per cent rule permits the banks to create deposits through making loans, it is necessary to ascertain whether this rule forces borrowers to maintain larger balances during the life of their loans than are essential to the sound conduct of their enterprises. It is, as a matter of fact, difficult to generalize in this connection since the correct proportion of “cash” to be maintained varies from business to business as well as from season to season in many enterprises. One estimate places the proper proportion of cash (consisting largely of bank balances) held in the bank borrower’s business at from five to fifteen per cent of his current assets,⁶ depending upon the type of business. The borrower’s current liabilities are usually not more than half—and often less than half—of the quick assets. His “notes payable to banks” ordinarily make up only a part of his current liabilities. It would seem, therefore, that even when cash balances average no more than five per cent of the bank borrower’s current assets, they would amount to twenty per cent or more of the amount borrowed at the bank.

All that the banks ask, as a rule, is that the balance main-

⁶ Phillips, C. A., *op. cit.*, p. 165.

tained *average* twenty per cent of the amount borrowed during the life of the loan, or that the *average* balance amount to one-fifth of the line of credit granted. It is quite natural that a borrower should draw his balance below this figure directly after the loan is granted, and that he should build it up to more than the average as goods are sold and the maturity of the loan approaches. In so doing he is not evading the requirement of the rule. To illustrate, a borrower with an average balance of \$10,000 obtains a loan of \$50,000 for six months. Directly after the loan is granted his balance will stand at, say, \$60,000. As he draws checks against his account to pay his creditors, the balance will be reduced, perhaps to \$5000. He has used not only the amount borrowed, but \$5000 in addition. As his goods are sold, his balance will be increased from time to time, so that it averages \$10,000 during the life of the loan. Naturally, at no time would he allow it to fall to zero as that would place him in a precarious financial position, but he may allow it to fall to the lowest point compatible with safety at some time during the life of the loan, provided that he builds it up later to above the average amount, a procedure which he would naturally follow in any event.

The foregoing observations should make it clear that the banker is not able, by virtue of the twenty per cent rule, to create deposits by making loans. It may be argued that enterprises with holdings of high-grade, readily marketable securities may operate perfectly safely with a smaller margin of cash than is normally thought necessary, and that compliance with the twenty per cent rule forces them to keep larger balances than are essential to a sound position. Unless such security holdings are being accumulated with the intent of retiring a bond issue or of meeting some unusual current obligation, however, they should be regarded skeptically by the banker who may properly prefer to see such capital utilized in the business in lieu of funds obtained through borrowing at the bank.

In fact, the whole idea that the twenty per cent rule constitutes a means whereby individual bankers can increase their deposits through their lending operations is very largely

a myth. The borrower obtains accommodation at the bank because he has payments to make, and the banker may normally expect the entire amount of the loan to be checked against very shortly after the proceeds have been credited to the borrower's deposit account.

Checks redeposited in the lending bank.—While it is reasonable to conclude from the preceding qualifications of Phillips' analysis that the typical borrower checks against the entire proceeds of his loan at the bank, it is necessary to take account of the probability that some of the checks drawn by borrowers will be sent to creditors who will re-deposit them in the lending bank. To the extent that this occurs, the lending bank will not lose reserve to other institutions and may thereby lend more than the amount of its surplus reserve. Thus, if we accept Lawrence's estimate that somewhere in the neighborhood of one-third of the checks drawn by borrowers against the proceeds of their loans are redeposited in the lending bank, the latter would lose reserve funds to other banks only to the amount of \$67,000 for each \$100,000 of loans granted.

Without attempting to pass judgment on the accuracy of Lawrence's estimate, it may be pointed out that such an estimate cannot be used in practice by the banker in granting loans to customers for the reason that it is an average for all of the banks of the country. In a particular instance, the banker is unable to tell whether or not any of the checks drawn by a borrower will be redeposited in his bank. In one case, 40 or 50 per cent of the checks drawn by a borrower may be redeposited by the recipients; in another, none. Obviously, the conservative banker must operate on the assumption that all of the checks drawn by borrowers will be deposited in other banks. Only in this fashion can he be certain that his reserves will not be unduly depleted.

As a practical matter, the individual banker bases his decision in the matter of granting added loans or of making added investments upon his reserve position. If a prospective borrower wishes to obtain a loan of \$50,000 from a bank, the banker will grant the loan—if the risk is satisfactory—provided that he has \$50,000 of excess reserve. Otherwise,

he will either refuse the loan or liquidate some of his secondary reserves or borrow at the reserve bank in order to grant it. Assuming the banker to have \$50,000 excess reserve and to have granted the loan, if \$20,000 of the checks drawn by the borrower are redeposited in the lending bank it is true that this bank will lose reserve funds only to the extent of \$30,000 and will thereby still have an excess reserve of \$20,000 which can be loaned or invested. At the time of granting the \$50,000 loan, however, the banker would not be able to depend upon this and would hence confine the amount of his loan to the amount of his surplus reserve.

Taking this view of the matter, there is little reason for maintaining that the individual bank creates deposits for itself through the process of making loans. While some proportion of the funds borrowed may be paid to individuals who will redeposit it in the lending bank, the same thing might occur in a banking system in which checks were not used. Under the latter supposition, a bank with a \$50,000 excess reserve, upon making a loan of that amount, would pay the entire proceeds of the loan to the borrower in the form of cash. The borrower would then use the cash to pay his creditors and some of the latter might then deposit the cash they had received in the bank which had made the loan. This bank would then find its reserve built up again by the amount of these deposits and could again use the excess for the purpose of making added loans. This is approximately what happens in the case of an individual bank under the check system, except that the borrower, instead of taking his loan in cash, gets a deposit credit from the bank and pays his creditors by means of checks drawn against this credit. Of course, to the extent that these checks are deposited by the recipients in the lending bank, the latter does not lose reserve even temporarily, as would the bank with no checking accounts; but since the banker is not in a position to know what proportion of the borrower's checks will be so redeposited, he bases his decision with respect to making loans or investments on his reserve position in the same manner as would the banker who had no checking deposits.

Conclusion.—In conclusion it may be stated that, as a matter of practice, the individual bank lends only the amount of its surplus reserve (or the amount it is willing to borrow from the reserve bank). Thus a bank maintaining a ten per cent reserve ratio and receiving a deposit of cash or checks on other banks of \$1000 could lend only \$900, after setting aside a reserve of \$100 against the deposit. Theoretically, there are two conditions under which an individual bank could lend more than it had, or could obtain, in the way of surplus reserve. First, if all or some proportion of the checks drawn by borrowers were redeposited in the lending bank, this might be done. Second, if the other banks of the system were all expanding their loans and investments at the same rate as a particular bank, so that checks drawn by borrowers of the latter bank would be offset in the clearing process by checks drawn by borrowers of the other banks and deposited in the particular bank, then the latter bank would not lose reserve to the other banks of the system and might lend an amount greater than its surplus reserve. However, since the individual banker knows neither the proportion of borrowers' checks which will be redeposited in his own bank, nor the degree of rapidity with which other banks in the system are, or will be, expanding their loans and investments, he is not in a position, in practice, to lend more than the amount of his excess reserve at any time.

The difficulty with the old theory was that it failed to recognize the difference between the individual bank and the banks of the system as a whole. In order to show this difference more clearly, it will be necessary, in the following section of the chapter, to turn our attention to the inter-relation of deposits, reserves, and loans in the system of individual banks.

THE SYSTEM OF INDIVIDUAL BANKS

Multiple expansion.—In the system of individual banks, it is to be observed that loans and deposits aggregate several times the reserve funds held by the banks of the system. In other words, one dollar of reserve funds supports loans and

deposits of several dollars. The question then arises as to the manner in which the system of banks can expand loans and deposits to several times the amount of its reserves, while the individual bank is able to lend approximately only what it has in the way of excess reserves.

The explanation of this seeming contradiction is to be found in the fact that the loss of reserve funds by an individual bank as a result of its lending operations leads to the acquisition of deposits by other banks in the system. To illustrate, take the case of Bank A, receiving a new cash deposit of \$10,000. Assuming a ten per cent reserve ratio, this bank could set aside \$1000 as a reserve against the deposit and lend the other \$9000 surplus reserve. After the borrower had checked against the proceeds of the loan and the bank had paid the checks so drawn, the bank's reserve would be decreased by \$9000, loans and discounts would be increased by \$9000, and deposits would remain unchanged. Thus :

Loans and discounts.....	\$9000		
Reserves	1000	Deposits.....	\$10,000

But the recipients of the checks drawn by the borrower would deposit them in their banks—which we shall designate Banks B.⁷ Upon collecting these checks from Bank A, Banks B would have their deposits and reserve funds each increased by \$9000. Of this amount, \$900 would act as a reserve against the \$9000 of deposits, leaving a surplus reserve of \$8100 available for lending or investment.

Upon lending this \$8100, Banks B would lose reserve funds in the same amount—in the manner already described—to Banks C. The latter group of banks, having its deposits increased by \$8100, would hold \$810 as reserve against this increase, and might then lend \$7290 to customers. This process would be repeated until the original \$9000 surplus reserve of Bank A had been diffused through the entire system of banks. The process is illustrated in part as follows :

⁷ Banks B may include Bank A, as would be the case when some of the checks drawn by borrowers of Bank A are redeposited in that bank by the recipients. In like manner, Bank A may be one of the group of Banks C, D, etc.

	<i>Loans</i>	<i>Reserves</i>	<i>Deposits</i>
Bank A	\$9,000.00	\$1,000.00	\$10,000.00
Banks B	8,100.00	900.00	9,000.00
Banks C	7,290.00	810.00	8,100.00
Banks D	6,561.00	729.00	7,290.00
Banks E	5,904.90	656.10	6,561.00
Banks F	5,314.41	590.49	5,904.90
	<hr/>	<hr/>	<hr/>
	\$42,170.31	\$4,685.59	\$46,855.90

Up to this point, the original \$10,000 deposit has resulted in an increase of reserves of \$4,685.59, an increase in loans of \$42,170.31, and an increase of deposits of \$46,855.90 in the banking system. Clearly, however, the process of diffusion has not worked itself out and would continue until, for the banking system, it had approached its limit, at which point we should find reserves of \$10,000, deposits of \$100,000, and loans of \$90,000.

Essential qualifications.—The foregoing analysis, while illustrative of the relations between reserves, loans, and deposits in the banking system, needs some qualification and added explanation.

In the first place, the analysis, to be correct, must postulate an effective demand for loans all along the line. Actually, there may be no such effective demand for additional credit from the banks' own customers. In many instances, the recipients of the checks drawn by borrowers will utilize these funds to retire their own indebtedness to the bank, rather than to build up their deposit accounts.

But, if the recipients of the checks drawn by borrowers use these funds for the purpose of reducing their indebtedness at their banks, the latter will have larger reserves than they need or are required to keep. Suppose, for example, that Bank A makes a loan of \$10,000, that the borrower draws a check for the entire amount to pay to a creditor, and that the creditor deposits the check in Bank B. After Bank B has collected the check, its reserve and deposits accounts will be increased as follows :

Reserves \$10,000

Deposits \$10,000

Suppose, however, that the depositor immediately draws a

check for \$10,000 in favor of the bank to repay a loan. The following changes will occur in the bank's balance sheet :

Loans — \$10,000
Reserve \$10,000

Deposits — \$10,000

That is, the bank's deposits and loans would each be decreased by \$10,000, but its surplus reserve would remain at that figure.

It goes without saying that a profit-making bank would not wish to have an idle surplus reserve that was earning no income for its stockholders. Consequently, in the absence of a demand for loans from its own customers, this excess over reserve requirements would be *invested* in the open market in acceptances, bonds, commercial paper, or loans to brokers. Let us assume that, in the example just given, the bank purchases \$10,000 worth of government bonds from a New York bond dealer, payment being made with a check on Bank B's reserve account in its Federal Reserve bank. This check will be deposited by the bond dealer in his New York City bank, and, when collected, the New York bank will find its deposits and reserve each increased by \$10,000, while Bank B will have exchanged \$10,000 of surplus reserve for \$10,000 of United States securities. The bond dealer's bank in New York will then have \$9000³ surplus reserve available for lending, and the expansion of loans and deposits will go on as indicated in the preceding section. The same result would have been attained if Bank B had purchased commercial paper or bank acceptances in the open market or had made loans to brokers through its New York correspondent. The deposit account of the commercial paper house, the acceptance dealer, or the broker, respectively, would have been increased by \$10,000 as would the reserve of the depository bank in New York City.

The second point to be made, then, is that as long as the banks either *lend* or *invest* any surplus reserve which they have available, the result is likely to be the acquisition of deposits by other banks in the system and the expansion

³ Assuming, for simplicity of exposition, a 10% reserve for all banks. Actually, of course, the required reserve is different for central reserve city, reserve city, and country banks; but the assumption of a uniform requirement for all banks does not invalidate the argument presented.

of loans *and* investments and deposits to several times the amount of such surplus reserve. If the banks of the system should refrain, however, from diverting commercial deposits into investment channels through the purchase of bonds or the extension of loans to brokers, a period of slackened commercial and industrial activity, resulting in a decreased demand for commercial loans, would be accompanied by an increase in the proportion of reserves to deposits rather than in a complete utilization of surplus reserves.

Before leaving the subject, a third qualification is necessary. If the individual bank had obtained its surplus reserve in the first place by borrowing at the Federal Reserve bank, the subsequent acquisition of new deposits by it might be used to retire its indebtedness at the Reserve bank. To revert to our previous example, in which we assumed Bank B to receive a new deposit of \$10,000, if Bank B at the time was indebted to its Federal Reserve bank, it would be very likely to use the surplus reserve funds thus obtained to reduce its indebtedness at the Reserve bank by \$9000 in the absence of a continued demand for loans from its own customers. In this instance, the process of expansion throughout the system would be nipped in the bud since the surplus reserve of Bank B has been used to repay indebtedness instead of for the purpose of making added loans or investments.

Conclusion.—In summing up the conclusions which have been arrived at in this section of the chapter, it may be noted that in the *system of banks* an increase in reserves furnishes the basis for a several-fold expansion of loans and deposits. In other words, although the individual bank does not lend appreciably more than it has in the way of surplus reserves, the banks of the system as a whole are in a position to increase their loans and deposits to several times the amount of excess reserve acquired by any of the banks in the system. This is possible because the funds that are withdrawn by borrowers are paid to creditors who build up their own accounts by depositing these sums to their credit in their own banks. The latter institutions may then lend a large portion of these deposits and the process is repeated, the original surplus reserve becoming diffused throughout the

system until it supports loans and deposits of several times its amount.

In the absence of an effective demand for loans, any bank receiving added reserves through an increase in its deposits may either invest the amount of excess reserve in open market loans or securities, or repay its own indebtedness at the Reserve bank. In the former case the expansion continues, while in the latter it is immediately halted. Barring the existence of indebtedness at the Reserve bank, the individual profit-making institution will not ordinarily hold idle reserves in excess of the amount required by prudence, law, or custom. Consequently, it is to be expected that loans and investments on the one hand and deposits on the other will ordinarily be maintained at the maximum figure permitted by the size of the reserves which the banks insist on keeping.

Through the operation of the clearing and collection system, the checks drawn by the borrowers from a particular bank are largely offset by checks on other banks which have been deposited with this particular bank. Since checks on other banks are claims to immediate payment in reserve funds, the individual banker considers deposits of such checks in the light of cash deposits (after allowing time for their collection), a large proportion of which is available for lending or investment. Inasmuch as the majority of these checks is used to offset other checks at the clearing house, however, the amount of reserves which the banks find it necessary to maintain is sharply reduced, and the check currency takes the places of other media of exchange to a large extent. It is thus apparent that the system of banks in effect creates an immediate means of payment based on the capital of its customers which may expand as needed up to a limit set by the reserve ratio which the banks are required, or find it desirable, to keep for the purpose of maintaining solvency.

CHAPTER XVIII

CENTRAL BANKING

Origin and nature.—In modern advanced countries the central bank is an integral part of the commercial banking and monetary system. It is only in comparatively recent years that central banking *per se* has received much attention. Before the Great War, the Bank of England, the Bank of France and the German Reichsbank, among others, were recognized as central banks, but their chief distinguishing feature was the practical monopoly of note issue privileges which they were granted by their governments. Moreover, certain large countries, such as the United States and Canada, had no institutions of this sort, and the same was true of a number of smaller countries.

The earlier central banks had their origin as a rule in their ability to serve the government financially. Thus the Bank of England, at the time of its organization, granted the government a perpetual loan of £1,200,000, the amount of the bank's capital, which was later increased from time to time. In exchange for such accommodation the government permitted the central bank to issue notes and, in the usual case, denied that privilege to other banks, with the exception, in certain instances, of a limited number of banks which already had outstanding note issues.

In these early days, note issue privileges were considered essential to the conduct of a commercial banking business, which accordingly placed any bank with a practical monopoly in the issue of notes in a position of great advantage. Consequently, the early central banks did a large business with the general public and were, in an important sense, *the* commercial banks of their day.

As time went on, however, other institutions began to develop a commercial banking business. This was especially

true in England where the rapid evolution of an efficient check system made the conduct of commercial banking comparatively simple, even without the note issue privilege. This led the Bank of England to focus its attention on the problems of maintaining the redeemability of its notes in gold, controlling the money market in London, and, when necessary to the first purpose, using its powers of control to influence the movement of gold into or out of the country. While a general banking business was still carried on, it began to assume an importance which was secondary to the performance of the functions noted.

In other countries, where the check system failed to develop, the central banks continued to do a large business with the general public. Even in these countries, however, banks of deposit doing a commercial business were organized, although their deposits were not subject to check. This led to a large measure of dependence on the central bank for notes, central bank notes being obtainable by rediscounting customers' paper at the central institution. The central bank accordingly came to exercise considerable control over the affairs of the other commercial banks.

In the countries in which central banking structures were established after a fully-developed commercial banking system had long been in operation, the tendency has been to limit the powers of the central bank to dealings with the existing commercial institutions. In other words, the central bank was designed to be a bankers' bank, not an institution doing business with the general public.

It is the functions which are performed as a bankers' bank which distinguishes the central bank from other institutions; whether the central bank does business with the general public or not. It is accordingly with these specialized central banking functions that we shall be concerned in the following pages.

CENTRAL BANKING FUNCTIONS

Traditional functions.—The traditional pre-war view of the functions of a central bank, based in large measure on the established procedure of the Bank of England, has

been clearly and concisely summarized by Dr. B. M. Anderson, Jr., as follows:¹

(1) It is the business of a central bank to protect the paper money of the country by converting it into gold on demand. This is its first and most essential function, and everything else must be subordinated to this.

(2) It is the business of the central bank to ease off monetary stringencies and to prevent business crises from degenerating into money panics. In a crisis, the central bank supplies whatever money is necessary, at a steep discount rate. It enables solvent men to protect their solvency, but it does not regard it as its duty to validate the unsound assets of really insolvent men, or to help defer the liquidation of stale positions.

(3) In times of great speculative excesses, whether in commodities or in securities, central banks should act to prevent the extension of unsound credits, to protect the liquidity of the banks of the country, and to check speculative excesses by tightening the money market.

Until comparatively recently these were considered to be the distinctive and proper functions of a central bank by practically all banking students. They would still be held by a majority of monetary and banking experts under normal gold standard conditions. At the present time, however, with practically all important countries off the gold standard, the first function stressed by Dr. Anderson, and considered as most essential, is no longer valid. In the United States, on the other hand, gold reserves are so excessive that no difficulty would be encountered in redeeming Federal Reserve notes in gold were such redemption freely permitted by law. Since it is not, redemption of notes in gold, here as in foreign countries, can no longer be considered the central bank's foremost function.

Stabilization of the price level. — Even before the general departure from the gold standard in the early thirties, an increasing number of economists adopted the position that the chief function of a central bank should be to maintain a stable level of prices. This doctrine, in its most extreme form, is illustrated in the following quotation from an article by the noted Swedish economist, Professor Gustav Cassel, written after the collapse of the American stock market in October 1929:²

¹ *Chase Economic Bulletin*, May 16, 1932, p. 4.

² "Safeguards of Prosperity," *American Bankers Association Journal*, December 1929, p. 568.

A central bank has no other function and should never for a moment contemplate taking over any other function than that of keeping the purchasing power of its currency in regard to commodities at the highest possible stability.

Not many observers would go to these lengths in asserting that the maintenance of a stable commodity price level was the only proper function of a central bank. Some favor stabilizing the cost of living. Others would include wages, rents and security prices in the price index which they would have stabilized. Still others would not have the stabilization of the price level the sole objective of central banking policy, but merely an important aim to be attained so far as possible with due allowance for the existence at times of other significant factors.

In short, there is still little unanimity of opinion with regard to details and technique on the part of those who favor the general concept of stability of the price level as the major aim of central banking policy. At all events, the pursuance of such a general policy by the central bank raises serious question regarding the maintenance of the gold standard, the control of credit and other problems of a monetary nature, analysis of which must be postponed to a later point. This objective is merely mentioned here since it is now considered to be a proper central banking function by a substantial group of authorities.

Stabilization of business.—Another group of monetary theorists, whose views may be distinguished from those of the price level stabilizers, consider the stabilization of business to be a prime function of the central bank. This group differs from the price level stabilizers in that its members feel that the central bank should aim at the maintenance of business stability—high productive output, unimpeded flow of goods to market, a balance between production and consumption, etc.—without paying much attention to the price level. Drastic changes in the price level, it is claimed, are a result rather than a cause of business instability. Therefore, if the central bank can maintain a balance among the various elements in the business structure, disturbing fluctuations in the price level will be largely eliminated.

This objective, like that of the price stabilizers, involves subtle problems in monetary theory which cannot be considered critically until the factors determining the value of money have been carefully studied.

Controlling foreign exchange. — A function of many central banks today, especially since the outbreak of war in Europe, consists of controlling exchange rates in the foreign exchange market. Such control is exerted by purchasing all foreign exchange from those who have claims against foreigners and then strictly regulating the sale of exchange to those who wish to make purchases in foreign countries. By keeping the demand for exchange exactly equal to the supply in this fashion, a high degree of stability of the country's monetary unit in the foreign exchange market may be secured when not on the gold standard. Most of the belligerent countries have adopted varying degrees of exchange control, the actual control being carried out by the central bank under the direction of the Treasury. In countries practicing exchange control, this function may be considered as replacing the redemption of notes in gold under gold standard conditions.

CHARTER REGULATIONS AND RESTRICTIONS

Form of organization. — Almost without exception, central banks are organized in the form of corporations or joint stock companies under special charters granted by the state. These charters set forth the powers and privileges which are allowed to the bank as well as the restrictions under which it is required to operate. They ordinarily run for a definite period of time, being subject to renewal on the same or different terms at the date of expiration, although several countries, of which Australia, England and the United States are examples, have granted indefinite or indeterminate charters to their central banking institutions.³ Although there are many points at which central bank charters differ from one another, it will be worth while to summarize the typical charter regulations and restrictions of central banks generally. These may be discussed under the heads

³ See Kisch and Elkin, *Central Banks*, Appendix I.

of capital and earnings, management, nature of business, and relations with the government.⁴

Capital and earnings.—The central bank, as has been indicated, holds a position of prime importance in the banking system and must therefore possess a financial structure of unquestioned soundness. Sufficient capital is one important requisite in the attainment of this end, and central bank charters have accordingly included the requirement that at least a specified minimum of proprietors' capital shall be represented in the business at all times. The proportion of assets equivalent to the capital item then constitutes a margin of protection for the benefit of noteholders, depositors, and other creditors of the bank, in the event of unusual losses or of liquidation. An argument against an unduly large capital, on the other hand, is to be found in the fact that central banks are strictly limited in respect to the type of business they may undertake. Because of these limitations, too large a capital investment may easily result in the accumulation of an unnecessarily large amount of idle cash which cannot find investment opportunities in proper channels.⁵ Furthermore, these very limitations on the bank's business are for the purpose of insuring against unsound or non-liquid investments, so that a large capital requirement is not so necessary as in the individual profit-making institutions which engage in a somewhat wider scope of business.

In actual practice, the capital required or maintained varies rather widely in relation to total resources. The Bank of England has a relatively large capital of £14,553,000, which amounted on November 28, 1928, to approximately 10.5 per cent of total resources. The capital of the Bank of France, on the other hand, in June of the same year, equalled only 0.22 per cent of its resources, while the paid-in capital of the combined Federal Reserve Banks was equal to 2.8 per cent of combined resources on the same date. These figures, taken by themselves, are misleading, since surplus—which equally with capital affords protection to the creditor—has been

⁴ The organization of the material presented in this section of the chapter has been suggested in part by the arrangement of the textual portion of Messrs. Kisch and Elkin's *Central Banks*. The author is also indebted to this admirable piece of work for much of the factual information referred to in this section of the chapter.

⁵ *Ibid.*, p. 40.

omitted from consideration in each case. Nevertheless, it may be stated that capital requirements for central banks tend to be smaller than would be considered proper for individual banking institutions. This statement is made, of course, with reference to the majority of central banks the stock of which is privately owned. We need not consider here the exceptional cases where the capital is held entirely by the state, as in Latvia and Finland.

Earnings.—It is a traditionally accepted maxim that a central bank should not be operated primarily for profit. The nature of its functions in the banking system is such that profit-making is not always compatible with the most efficient performance of central banking duties. On the other hand, it has already been pointed out that the majority of central banks are privately owned companies of the joint-stock type, and it is not reasonable to expect their stockholders to go unrewarded. The problem has therefore been to provide a reasonable return to the stockholders while yet insuring sound and conservative management in the best interests of the banking system as a whole.

An examination of central banking laws^a shows a considerable degree of uniformity in the method used to meet this problem. In the usual case, a fixed initial dividend is specified to be paid to shareholders. Earnings in excess of this amount are then usually distributed in some designated fashion between the bank (i.e., carried to surplus), the government, the stockholders, and in some cases the employees. There are but few instances, that of the United States being the most important, in which the dividend to central bank stockholders is absolutely fixed. The more usual procedure permits shareholders to participate in any large profits the bank may make, but only after a considerable slice of earnings has been retained in the business or paid to the government.

It should be observed that the dean of central banks, the Bank of England, is not limited by law in this or in other usual ways, but that in practice it conforms to sound central banking principles, having, in fact, established the validity of these principles in a number of instances.

^a *Ibid.*, Appendix I.

Surplus.—Much of what has been said about capital applies to the building up of a surplus by central banks. Some surplus is desirable as an additional protection to creditors, and most central banking laws provide for the creation of a surplus out of earnings, as related in the preceding paragraphs. Furthermore, an increase in the bank's surplus forms a convenient method of increasing the margin of protection to creditors without an increase in the capital stock, which, although it may have been sufficient at the time the bank began business, has failed to keep pace with subsequent development. At the same time, a surplus may prove convenient by virtue of permitting the payment of dividends in slack years or the absorption of losses without impairing the formal capital of the bank.

The surplus should be somewhat related to the size of the bank's capital and usually is so related. Thus, the Bank of England, with a relatively large capital, maintains a comparatively small surplus of slightly over £3,000,000, while the Bank of France, whose capital is very small, has a surplus very considerably larger than its capital stock, the same being true of the combined reserve banks in the United States.

Liquidation.—It is naturally to be expected that a central bank will be a continuously operating institution. Nevertheless, governments have generally made provision for winding up the affairs of the central institution under certain extreme conditions. Fraud, inefficiency, flagrant mismanagement, and, at times, improper interference by the government represent the types of conditions under which liquidation may occur.

Management.—Although the majority of central banks are privately owned, it is common for the government to have some share in the management. The Bank of England is an exception to this rule, the government having no active voice in the management of this institution. On the other hand, in a few countries the entire management of the central bank is in government hands. Neither of these arrangements, however, is as common as that which provides for a division of managerial functions between representatives of the state and representatives of the bank's stockholders.

The problem of management is perhaps the most impor-

tant in the whole field of central banking. The central bank plays such a significant part in the monetary and banking systems of a country and may be such a powerful engine for good or evil that the managing body should be selected with an eye to the attainment of the highest possible degree of honesty, efficiency and ability.

Having created such a powerful machine as the central bank, the government ordinarily feels that it should have a hand in its operation. On the other hand, particularly in democratic countries, full control by the government of the central bank management is extremely dangerous, since the administration in power is almost certain to operate the bank in such ways as will prove to be expedient politically, but which are not usually in the best interests of the country.

In order best to protect the interests of the government and of the public and, at the same time, to avoid political control of the central bank by the particular party in power, a rather common expedient in the past has been to allow the government to appoint a minority of the governing board—often including one or two important officials—while the majority of the board has been selected by the stockholders. If the governmental appointments are for substantial terms of office, so that they cannot be readily juggled to suit the political needs of the moment, this method of dividing control between the government and the stockholders is probably as satisfactory an arrangement as can be readily resorted to.

If the central bank could be depended upon, as in England, always to hold the interests of the banking system as a whole ahead of opportunities for profit making, the need for any government representation in the management would best be dispensed with entirely. In fact, it is a real question in any country whether, with proper restrictions regarding dividends, a completely private management would not be the best arrangement. If the government feels, however, that it should be represented in the management of the bank, it is desirable to limit its representation to a minority of the governing board in order to be certain that central banking policies shall not be closely tied to the exigencies of government finance.

While the foregoing conclusion is perfectly valid, the trend

in recent years has been in the direction of greater government control rather than less. Thus, prior to 1936, the Bank of France had a board of fifteen Regents and three Auditors elected by the stockholders and a Governor and two Deputy-Governors appointed by the President of the Republic. After the passage of the law of July 24, 1936, the governing board was increased to twenty-six, mostly public appointees, and only two selected by the stockholders.

Similarly, under the original charter of the Bank of Canada in 1934, the government had no direct voice in the management. An amendment of 1936 altered this arrangement by increasing the capital stock, the increase to be held by the Minister of Finance on behalf of the Dominion. The same amendment made a majority of the members of the board of directors appointees of the government. Since the advent of the Hitler regime in Germany, the Reichsbank has been under government control, and in the United States, the Board of Governors of the Federal Reserve System, which has predominant powers of control, consists entirely of government appointees. The former, and highly proper, practice of dividing control between the government and the stockholders therefore appears to be decidedly on the wane.

Nature of business.—It has already been pointed out that, in countries in which the central bank has been long established and has developed with the banking system of the country, it is common to find the central institution endowed with the power to carry on a general banking business with the public. We find this to be true of the central banks of England, Germany, France and a number of other countries.

In spite of the fact that many of the older central banks do a general banking business, it is not in this connection that they merit special treatment. It is rather with their unique functions, which differentiate them from the other banks of the system, that we are concerned at this point. In many ways, the most significant of these is the power to issue notes.

Note issues.—The typical central bank has a monopoly of the right to issue bank notes in the country of its location. This exclusive privilege is of particular importance in countries such as France where the use of checks has not as yet

become widespread, for it gives the central bank control over the chief type of domestic currency. This probably explains in part the large general business of the Bank of France and the Reichsbank, in contrast to the limited business with private enterprises engaged in by the Bank of England, the wide use of checks in England having made the note issues of the Bank of secondary importance from the point of view of its own business. From the social point of view, however, in England as well as in countries with less highly developed check systems, the note issue privilege is of wide importance, for it is customary for the other banks of the system to use central bank notes, in part at least, as reserves against their own deposits, the notes being full legal tender in many cases. Consequently, the issuance of central bank notes is practically uniformly surrounded with limitations and regulations to insure their soundness.

The chief problem in the regulation of such note issues is to prevent excessive issues with resulting inflation and undue loss of gold to foreign countries. This problem applies, of course, only when the international gold standard is in operation, but may be considered here in spite of the fact that the full gold standard has been abandoned by practically all countries for the present. Two methods have been used for attaining the end mentioned above. The first is the system followed in England, Japan, Norway, and Sweden. The central banks of these countries were permitted to issue specified amounts of notes without specie backing, known as uncovered or fiduciary issues, although security in the form of government obligations, commercial paper, and the like, was usually required against these notes. Any notes issued in excess of the specified amounts must then be secured by 100 per cent of specie, except in the case of Sweden where 50 per cent specie only was required against excess issues. A degree of emergency elasticity is given to such note issues by permitting an increase in the fiduciary issue under certain extreme conditions.

The second and more common method of preventing excessive issues of notes is to require the maintenance of a proportional reserve against notes in circulation. If, in addition, the notes may be secured by general banking assets or

commercial paper, an element of elasticity is secured which is out of the question with a fixed fiduciary issue. The degree of elasticity is, of course, limited by the size of the reserve which must be maintained, the larger the reserve the less the possibility of expansion. On the other hand, since central bank notes are very generally given substantial or complete legal tender powers, it is desirable to have a fairly large proportional reserve. In practice the reserve required in the more important countries on the gold standard varied from $33\frac{1}{3}$ to 50 per cent, 40 per cent being the minimum most frequently required. A number of countries, however, permitted their central banks to hold a portion of this reserve in foreign exchange, so that the proportion of notes held in gold in the bank's own possession was often less than the percentages mentioned.⁷

Business with other banks.—Aside from its note issue powers, the typical central bank plays a significant part in acting as a bankers' bank. In acting in this capacity, it performs services for the individual banks similar to those which the latter perform for business men. It receives deposits from them, extends them credit in time of need, collects checks and other items, transfers funds from place to place, and so on. Just as individual business men consider both hand-to-hand money in their possession and deposits in the bank as their reserves of cash, so the banks of the system include central bank deposits, as well as notes of the central bank, in their reserves against their own liabilities. Very little standard money is held by the banks as a result. Thus the central bank has the responsibility of holding practically the entire final (i.e., gold) reserve upon which the credit and monetary system of the country is based.

Because of the heavy responsibility involved in protecting the country's gold reserve, it is customary and proper to limit the type of loans that the central bank may make to the soundest variety. As stated by Messrs. Kisch and Elkin, "To comply with the tests of eligibility for purchase or discount by a Central Bank the paper should conform to certain require-

⁷ See the *Federal Reserve Bulletin*, August 1929, p. 563. This discussion applies, of course, to the period before the widespread departure from the gold standard in the last four months of 1931.

ments in respect of the purpose for which it has been created, its period of maturity and its quality. As regards purpose, the prime *desideratum* is that the paper should be drawn to provide finance required for *bona-fide* commercial purposes, which would cover outlay incidental to the production, transport and marketing of agricultural and industrial goods. Such bills are of their own nature self-liquidating, as the sale of the commodity provides funds for the payment of the bill. These requirements are not satisfied by papers drawn to finance the carrying of stocks and shares, and if any such paper is to be admitted as an asset of a Central Bank there is need for definition."⁸ If paper of the latter type is admitted at all, it is usually restricted as to purpose to carrying or trading in government obligations or bonds of public or quasi-public enterprises. Even when the discounting of government paper is permitted, the total, with the exception of short-term treasury notes or bills, should be limited to some proportion of the paid-in capital and surplus—although usually it is not.

Control of the money market.—Another important function of the central bank is to stabilize conditions in the money market, preventing, so far as possible, undue fluctuations of money rates such as tend to result from treasury financing, large exports and imports of gold, and similar factors. To make possible the performance of this function, the central bank is usually given the power to buy and sell gold, to obtain loans in foreign countries, and to buy and sell certain specified types of paper or securities in the open market. These powers, together with the ability to change its discount rate, give the bank a measure of control which is ample to prevent sudden and undesirable disturbances in the money market of the country. Funds may be pumped into or withdrawn from the market by the purchase or sale of open-market paper, thus offsetting, when desirable, opposite influences resulting from tax payments, government disbursements, or substantial gold movements.⁹ Alterations, upward or downward, in the rate of discount may also be used to supplement open-market operations by attracting or repell-

⁸ Kisch and Elkin, *op. cit.*, p. 124.

⁹ The method by which this is accomplished is explained more fully in Chapter XXIII.

ing funds from foreign markets, as the situation may require.

Relations of central banks with the government.—It may easily be inferred from the preceding discussion that there is usually a close relationship between the central bank and the government. In the first place, the central bank practically always acts as a fiscal agent for the government, holding the latter's temporary surplus funds on deposit, assisting it in the flotation of bond and note issues, aiding in the collection of taxes and in making disbursements, and performing other services of a similar nature. On the whole, it is highly desirable that the central bank should act in this capacity. Only by so doing, in fact, can it exert a substantial influence in stabilizing conditions in the money market.

A second manner in which the central bank can serve the government is by making loans to it. While the right to grant loans to the state may be considered as justifiable within certain limits, it may easily be abused unless regulated by law, especially when one or more important government appointees are included in the managing body. Clearly, the government representation in central bank management should be for the protection of the public and the banking system, not to secure favored treatment for the public treasury department. Consequently, the charters of many of the central banks limit the amount and duration of loans that may be made to the state. It is true, of course, that in time of war, or other national emergency, such legal regulations are frequently suspended, but this is no less true of regulations governing the standard of value as well, and the presence of some such statutory limitations in normal times is without question highly salutary.

Central banks in wartime.—The foregoing discussion of powers and limitations of central banks has indicated certain general practices, as well as variations in these practices, on the part of governments in chartering their central banking institutions. It should be pointed out, however, that in time of war or other emergency, many of the restrictions and limitations normally in force are relaxed or abandoned. This is the situation prevailing at present in the leading foreign countries. It should be borne in mind, therefore, that the

principles and practices set forth in this chapter are, except where specifically noted, applicable to normal peace-time conditions. It is neither possible nor desirable at this point to discuss all the deviations from ordinary practice which the war has engendered. A few have been noted in passing, but there are many others. Since they are temporary in nature, and subject to abrupt change, it does not seem worth while to attempt to describe them. It will suffice to note that they exist and to concentrate our attention on the more fundamental and lasting principles of peace-time central banking.

Conclusion.—This and the preceding chapters in this section of the text have considered in some detail the major features of the banking process. This process is epitomized on the bank statement, which indicates the results of various banking operations, and the following chapter deals with bank statements in some detail and attempts to show the effects of bank operations on such statements.

REFERENCES

- Andreades, A. *History of the Bank of England*. London. 1924.
Bagehot, W. *Lombard Street*. London (Fourteenth Edition). 1924.
Conant, C. A. *A History of Modern Banks of Issue*. New York (Sixth Edition). 1927.
Dixon, F. J. "Banking Legislation in Canada, 1934," *American Economic Review*, March 1935.
Dunbar, C. F. *The Theory and History of Banking*.
Ellis, H. S. *Exchange Control in Central Europe*. Cambridge. 1941.
Gilbart, J. W. *Works*, IV.
Hawtrey, R. G. *A Century of the Bank Rate*. New York. 1938.
Kisch, C. H. and Elkin, W. A. *Central Banks*. London. 1928.
Madden, J. T. and Nadler, M. *International Money Markets*. New York. 1935.
Spalding, W. F. *The London Money Market*. London (Fourth Edition). 1930.
Stokes, M. L. *The Bank of Canada; The Development and Present Position of Central Banking in Canada*. Toronto. 1939.
Willis, H. P. and Beckhart, B. H. *Foreign Banking Systems*.
Willis, H. P. *The Theory and Practice of Central Banking*. New York. 1936.
Federal Reserve Bulletin. October. 1934.

CHAPTER XIX

BANK STATEMENTS AND EXAMINATIONS

The banking process epitomized.—The results of performing the various banking functions which have been considered in earlier chapters are shown in concise form for the individual bank in its periodical statements of condition, and for various groups of banks by combined condition reports which are made up of aggregates of the statements of the individual banks composing the group. The purpose of this chapter is to consider the statements, or condition reports, of both individual and Federal Reserve banks in some detail, to appraise their value, and to describe the systems of bank examinations out of which these statements arise.

A typical statement.—While bank statements, as published periodically, show the various items among the resources and liabilities in varying degrees of detail, a statement which is not too highly condensed is desirable from the standpoint of this analysis. In order to have a statement which is typical of the individual banks of the country and which is sufficiently detailed for our purposes, it seems desirable to use a combined statement of all member banks of the Federal Reserve system. Such a combined condition report for member banks is reproduced on the following page. Since we shall consider it in the light of a statement of a typical member bank of the Federal Reserve system, the amounts, which are in thousands of dollars, will be assumed to be in dollars.

The bank's funds.—In analyzing the statement of condition, the most satisfactory method of approach will be to consider first those items which represent the bank's funds. Then the method of determining what proportion of these funds may be loaned or invested will be discussed, after which we shall be in a position to consider the items which represent the bank's earning resources.

MEMBER BANKS—CONDITION ON DECEMBER 31, 1940

(Amounts in thousands of dollars)

ASSETS	
1. Loans (including overdrafts)	15,320,598
2. United States Government direct obligations	12,337,408
3. Obligations guaranteed by United States Government	3,485,648
4. Obligations of States and political subdivisions	3,012,093
5. Obligations of Government corporations and agencies, not guaranteed by United States	499,355
6. Other bonds, notes, and debentures	2,053,842
7. Corporate stocks (including Federal Reserve Bank stock)	416,533
Total loans and investments	37,126,007
8. Reserve with Federal Reserve Banks	13,901,733
9. Cash in vault	991,140
10. Demand balances with banks in United States (except private banks and American branches of foreign banks)	6,084,424
11. Other balances with banks in United States	100,881
12. Balances with banks in foreign countries	11,311
13. Due from own foreign branches	2,182
14. Cash items in process of collection	2,783,960
15. Bank premises owned and furniture and fixtures	914,425
16. Other real estate owned	228,243
17. Investments and other assets indirectly representing bank premises or other real estate	111,140
18. Customers' liability on acceptances	83,052
19. Income accrued but not yet collected	105,026
20. Other assets	124,082
Total assets	62,657,678
LIABILITIES	
Demand deposits—Total	44,110,412
21. Individuals, partnerships, and corporations	29,570,001
22. United States Government	610,118
23. States and political subdivisions	2,723,600
24. Banks in United States	9,581,109
25. Banks in foreign countries	700,073
26. Certified and officers' checks, cash letters of credit and travelers' checks, etc.	913,208
Time deposits—Total	12,319,198
Individuals, partnerships, and corporations:	
27. Savings deposits	10,266,149
28. Certificates of deposit	654,041
29. Christmas savings and similar accounts	27,833
30. Open accounts	737,895
31. Postal savings	55,987
32. States and political subdivisions	435,075
33. Banks in United States	135,220
34. Banks in foreign countries	6,102
Total deposits	56,429,610
35. Due to own foreign branches	182,097
36. Bills payable, rediscounts, and other liabilities for borrowed money	3,282
37. Acceptances outstanding	97,401
38. Dividends declared but not yet payable	38,953
39. Income collected but not yet earned	67,066
40. Expenses accrued and unpaid	77,016
41. Other liabilities	63,177
Total liabilities	56,960,102
CAPITAL ACCOUNTS	
42. Capital	2,356,258
43. Surplus	2,279,621
44. Undivided profits	721,444
45. Reserves for contingencies	295,830
46. Other capital accounts	44,354
Total capital accounts	5,697,516
Total liabilities and capital accounts	62,657,678
Net demand deposits subject to reserve	35,261,610
Demand deposits - adjusted	30,429,002
Number of banks	6,486

The stockholders' equity.—First in point of time among the funds received by the bank is the initial capital paid in by subscribing stockholders. In some instances the stock may be sold at a premium at the time the bank is organized. When this happens the par value of the stock is listed as "Capital stock" (item 42) and the amount of the premium is set up on the statement under the head of "Surplus" (item 43).¹ In any event, as soon as the bank has commenced business, a third account—"Undivided profits" (item 44)—is set up. This account is credited as income is earned, and is debited as various items of expense, losses or dividends are paid by the bank.² From time to time, as the undivided profits accumulate, the directors vote to transfer certain amounts from undivided profits to surplus. Actually, this is only a bookkeeping transaction, but it is significant nevertheless as it indicates the decision of the directors to retain such funds permanently in the business.

As noted in an earlier connection (Chapter X), in an effort to rehabilitate the banking structure following the banking crisis, the R. F. C. furnished many banks with capital funds either through the purchase of newly issued preferred stock or by purchasing capital notes and/or debentures. The item "Preferred stock" is, of course, a part of the stockholders' equity and is included in the item "Capital" on the statement. "Capital notes and debentures" are part of the capital account, but represent obligations of the bank to outsiders and hence should be distinguished from stockholders' equity proper, although they are included under "Capital" on the statement.

With the development of the bank's business, a reserve for contingencies (item 45) may be set up which may be considered as part of the stockholders' equity. Items 38 and 40, on the other hand, represent definite amounts to be paid out by the bank, and are consequently not included in the capital account. Since they differ distinctly from deposits, however, they are mentioned at this point. In the

¹ Under Sec. 309 of the Banking Act of 1935, new national banks are required by law to have a paid-in surplus of 20 per cent of their capital before beginning business.

² If a special fund is set aside for the payment of dividends, the dividends, when paid, would be charged to this account rather than undivided profits.

statement under consideration, the capital account includes items 42 to 46 inclusive, amounting to \$5,697,115, or approximately one-eleventh of total liabilities (including capital account).

Gross deposits.— More important by far than the equity of the stockholders are the bank's deposits. Section 324 (a) of the Banking Act of 1935 provides that "The Board of Governors of the Federal Reserve system is authorized, for the purposes of this section, to define the terms 'demand deposits', 'gross demand deposits', 'time deposits', 'savings deposits', and 'trust funds'..." Under this authority, the Board of Governors revised its Regulation D, effective January 1, 1936. The following definitions of deposits, as contained in the revised regulation, will serve to indicate the variety of accounts which come under the head of gross deposits :

SECTION I. DEFINITIONS

(a) **Demand deposits.**— The term "demand deposits" includes all deposits except "time deposits" as defined below.

(b) **Time deposits.**— The term "time deposits" means "time certificates of deposit", "time deposits, open account" and "savings deposits", as defined below.

(c) **Time certificates of deposit.**— The term "time certificate of deposit" means a deposit evidenced by a negotiable or non-negotiable instrument which provides on its face that the amount of such deposit is payable to bearer or to any specified person or to his order —

(1) On a certain date, specified in the instrument, not less than thirty days after the date of the deposit, or

(2) At the expiration of a certain specified time not less than thirty days after the date of the instrument, or

(3) Upon notice in writing which is actually required to be given not less than thirty days before the date of repayment,³ and

(4) In all cases only upon presentation and surrender of the instrument.

(d) **Time deposits, open account.**— The term "time deposit, open account" means a deposit, other than a "time certificate of deposit" or a "savings deposit", with respect to which there is in force a written con-

³ A deposit with respect to which the bank merely reserves the right to require notice of not less than thirty days before any withdrawal is made is not a "time certificate of deposit" within the meaning of the above definition.

tract with the depositor that neither the whole nor any part of such deposit may be withdrawn, by check or otherwise, prior to the date of maturity, which shall be not less than thirty days after the date of the deposit,⁴ or prior to the expiration of the period of notice which must be given by the depositor in writing not less than thirty days in advance of withdrawal.⁵

(c) **Savings deposits.**—The term “savings deposit” means a deposit, evidenced by a pass book, consisting of funds (i) deposited to the credit of one or more individuals, or of a corporation, association or other organization operated primarily for religious, philanthropic, charitable, educational, fraternal or other similar purposes and not operated for profit,⁶ or (ii) in which the entire beneficial interest is held by one or more individuals or by such a corporation, association or other organization, and in respect to which deposit—

(1) The depositor is required, or may at any time be required, by the bank to give notice in writing of an intended withdrawal not less than thirty days before such withdrawal is made ;

(2) Withdrawals are permitted in only two ways, either (i) upon presentation of the pass book, through payment to the person presenting the pass book, or (ii) without presentation of the pass book, through payment to the depositor himself but not to any other person whether or not acting for the depositor.⁷

The presentation by any officer, agent or employee of the bank of a pass book or a duplicate thereof retained by the bank or by any of its officers, agents or employees is not a presentation of the pass book within the meaning of this regulation except where the pass book is held by the bank as a part of an estate of which the bank is a trustee or other fiduciary, or where the pass book is held by the bank as security for a loan. If a pass book is retained by the bank, it may not be delivered to any person other than the depositor for the purpose of enabling such person to present the pass book in order to make a withdrawal, although the bank may

⁴ Deposits, such as Christmas club accounts and vacation club accounts, which are made under written contracts providing that no withdrawal shall be made until a certain number of periodic deposits have been made during a period of not less than three months constitute “time deposits, open account” even though some of the deposits are made within thirty days from the end of such period.

⁵ A deposit with respect to which the bank merely reserves the right to require notice of not less than thirty days before any withdrawal is made is not a “time deposit, open account,” within the meaning of the above definition.

⁶ Deposits in joint accounts of two or more individuals may be classified as savings deposits if they meet the other requirements of the above definition, but deposits of a partnership operated for profit may not be so classified. Deposits to the credit of an individual of funds in which any beneficial interest is held by a corporation, partnership, association or other organization operated for profit or not operated primarily for religious, philanthropic, charitable, educational, fraternal or other similar purposes may not be classified as savings deposits.

⁷ Presentation of a pass book may be made over the counter or through the mails ; and payment may be made over the counter, through the mails or otherwise, subject to the limitations of paragraph (2) above as to the person to whom such payment may be made.

deliver the pass book to a duly authorized agent of the depositor for transmittal to the depositor.

Every withdrawal made upon presentation of a pass book shall be entered in the pass book at the time of the withdrawal, and every other withdrawal shall be entered in the pass book as soon as practicable after the withdrawal is made.

(f) **Gross demand deposits.**—The term “gross demand deposits” means the sum of all demand deposits, including demand deposits made by other banks, the United States, States, counties, school districts and other governmental subdivisions and municipalities, and all outstanding certified and officers’ checks (including checks issued by the bank in payment of dividends), letters of credit and travelers’ checks sold for cash, and drafts drawn upon or other authorizations to charge the member bank’s reserve account at the Federal Reserve bank.

(g) **Cash items in process of collection.**—The term “cash items in process of collection” means—

(1) Checks in process of collection, drawn on a bank, private bank, or any other banking institution, which are payable immediately upon presentation in the United States, including checks with a Federal Reserve bank in process of collection and checks on hand which will be presented for payment or forwarded for collection on the following business day ;

(2) Government checks and warrants drawn on the Treasurer of the United States which are in process of collection ;

(3) Such other items in process of collection, payable immediately upon presentation in the United States, as are customarily cleared or collected by banks as cash items.

Items handled as non-cash collections may not be treated as “cash items in process of collection” within the meaning of this regulation.

(h) **Net demand deposits.**—The term “net demand deposits” means gross demand deposits as defined in subsection (f) of this section less the deductions allowed under the provisions of subsection (b) of section 2 of this regulation.

Gross deposits include the accounts mentioned under the head of “gross demand deposits” in the foregoing quotation, plus time deposits. Total or gross deposits include items 21 to 34 inclusive in the statement. The aggregate amount is \$56,429,610, or some 90 per cent of total liabilities.

As a matter of fact, not all of the gross deposits are loaned or invested. Part of them is held in the form of reserve and part represents checks and items which are in process of collection (as defined in paragraph g of the Regulation) and are hence not yet available. The figure for net deposits is the one which depicts more accurately the amount of depositors’ funds which may be invested or

loaned, although the legal reserve in the Federal Reserve bank and cash held in the bank's own vaults must be subtracted from this item before the amount of actually loanable funds is obtained. The method for obtaining the figure for net deposits will be explained later in the chapter.

Another figure, made available by the Federal Reserve authorities in November 1935, is that for "demand deposits-adjusted." The following explanation of this item from the *Federal Reserve Bulletin*⁸ will show its purpose :

"These deposits are computed by adding to demand deposits other than those of banks and the United States Government the items of certified and officers' checks and cash letters of credit and travelers' checks and subtracting various cash items reported as on hand or in process of collection. These collection items, given on the asset side of the call report, show in part the amount of so-called 'float' outstanding, which varies considerably from time to time and, together with interbank balances, involves a double counting of deposits for all banks in the country. Cash items forwarded to correspondent banks for collection and credit and charged to such banks are generally included in balances due from banks and cannot be deducted in computing demand deposits-adjusted.

"The figure of demand deposits-adjusted shows in general the amount of balances in the checking accounts of individuals, partnerships, corporations, clubs, associations, and State and local governmental bodies, less a part of the checks outstanding against these accounts, and it may be said to represent in a general way the cash resources of the community placed on deposit with banks and readily available for use."

Borrowed funds. — A third method of obtaining funds for use in the banking business is to borrow them from the Federal Reserve bank or from other banks. Sometimes a member bank will rediscount customers' paper at the Reserve bank and sometimes it will discount its own note or notes. The bank may also borrow in effect by selling securities under an agreement to repurchase them at a specified date. In the statement all of these methods of borrowing are grouped together in item 36.

⁸ November, 1935, p. 714.

It will be noted that the sum of all the items representing borrowed funds in the statement is so small as to be negligible. The explanation of this is the extremely easy money situation which existed in 1940. While it is not customary for the banks of the country to borrow any very large amounts from other banks, they do borrow substantially from the Federal Reserve banks in times of tight money. Thus, in June 1920, member banks were indebted to the Federal Reserve banks in the amount of well over \$2,000,000,000, and in July 1929, by something over \$1,000,000,000.

Disposition of funds.—The bank's funds, as they become available, are usually either loaned to customers or invested in the open markets. It has been pointed out, however, that the bank's funds cannot all be put to such use, considerable amounts being tied up in the form of reserves or uncollected items. The extent to which deposits and other funds are ordinarily held in this fashion will be made clear by a description of the methods used in calculating the legal reserve requirements for member banks.

Calculation of reserve requirements.—Section 19 of the Federal Reserve Act, as amended by the Banking Act of 1935, sets forth the reserves required of member banks and furnishes the statutory basis for Regulation D of the Board of Governors of the Federal Reserve System. Section 2 of that regulation, dealing with the computation of member bank reserves, reads as follows :

SECTION 2. COMPUTATION OF RESERVES

(a) **Amounts of reserves to be maintained.**—Every member bank of the Federal Reserve System is required by law to maintain on deposit with the Federal Reserve bank of its district an actual net balance equal to three percent of its time deposits plus—

Seven percent of its net demand deposits if not in a reserve or central reserve city.

Ten percent of its net demand deposits if in a reserve city, except that if located in an outlying district of a reserve city or in territory added to such city by the extension of the city's corporate limits such bank may, upon the affirmative vote of five members of the Board of Governors of the Federal Reserve System, be permitted to maintain seven percent reserves against its net demand deposits.

Thirteen percent of its net demand deposits if located in a central reserve city, except that if located in an outlying district of a central

reserve city or in territory added to such city by the extension of the city's corporate limits, such bank may, upon the affirmative vote of five members of the Board of Governors of the Federal Reserve system, be permitted to maintain seven percent or ten percent reserves against its net demand deposits.

Notwithstanding any other provision of this regulation, the actual net balance which each member bank is required to maintain on deposit with the Federal Reserve bank of its district in accordance with the foregoing shall be changed by such percentage, within the limitations prescribed by law,⁹ as the Board of Governors of the Federal Reserve System shall prescribe from time to time pursuant to the sixth paragraph of section 19 of the Federal Reserve Act, as amended by the Banking Act of 1935, in order to prevent injurious credit expansion or contraction.

(b) **Deductions allowed in computing reserves.**—In determining the reserve balances required under the terms of this regulation, member banks may deduct from the amount of their gross demand deposits the amounts of balances subject to immediate withdrawal due from other banks and cash items in process of collection as defined in subsection (g) of section 1 of this regulation. Balances "due from other banks" do not include balances due from Federal Reserve banks, balances (payable in dollars or otherwise) due from foreign banks or branches thereof wherever located, or balances due from foreign branches of domestic banks. The word "banks" in the term "due from other banks" refers to incorporated banks and does not include private banks or bankers.¹⁰

(c) **Availability of cash items as reserve.**—Cash items forwarded to a Federal Reserve bank for collection and credit cannot be counted as part of the minimum reserve balance to be carried by a member bank with its Federal Reserve bank until the expiration of such time as may be specified in the appropriate time schedule referred to in Regulation J. If a member bank draw against checks before such time, the draft will be charged against its reserve balance if such balance be sufficient in amount to pay it; but any resulting impairment of reserve balances will be subject to the penalties provided by law and by this regulation.

(d) **Reserve against trust funds.**—A member bank exercising trust powers need not maintain reserves against trust funds which it keeps properly segregated as trust funds and apart from its general assets or which it deposits in another institution to the credit of itself as trustee or other fiduciary. If, however, such funds are mingled with the general assets of the bank, as permitted to national banks under authority of

⁹ The amount of the reserves required to be maintained by any such member bank as a result of any such change may not be less than the amount of the reserves specified above nor more than twice such amount.

¹⁰ A member bank exercising fiduciary powers may not include in balances "due from other banks" amounts of trust funds deposited with other banks and due to it as trustee or other fiduciary. If trust funds are deposited by the trust department of a member bank in its commercial or savings department and are then redeposited in another bank subject to immediate withdrawal they may be included by the member bank in balances "due from other banks," subject to the provisions of subsection (b) above.

section 11(k) of the Federal Reserve Act, a deposit liability thereby arises against which reserves must be maintained.

(e) **Continuance of "time deposit" status.** — A deposit which at the time of deposit was a "deposit evidenced by a time certificate of deposit," "time deposit, open account," or "savings deposit" continues to be a "time deposit" until maturity or the expiration of the period of notice of withdrawal, although it has become payable within thirty days. After the date of maturity of any time deposit, such deposit is a demand deposit. After the expiration of the period of notice given with respect to the repayment of any savings deposit or other time deposit, such deposit is a demand deposit, except that, if the owner of such deposit advise the bank in writing that the deposit will not be withdrawn pursuant to such notice or that the deposit will thereafter again be subject to the contract or requirements applicable to such deposit, the deposit will again constitute a savings deposit or other time deposit, as the case may be, after the date upon which such advice is received by the bank.

On the basis of this regulation, the Federal Reserve banks have furnished blank forms to member banks to be filled in with the appropriate figures in calculating their reserve requirements. A form of the type used for reserve city member banks in Federal Reserve cities is reproduced in Figure 17. It will be noted that the requirement against demand deposits for this class of bank was $17\frac{1}{2}$ per cent on the date of our statement, with a 5 per cent requirement against time deposits. This compared with $22\frac{3}{4}$ per cent for central reserve city members and 12 per cent for country bank members against demand deposits, the time deposit requirement being the same for all groups.

The method of calculation of the required reserve is clear from the reporting form. Reports must be submitted semi-weekly by member banks situated in central reserve cities and in reserve cities in which a Federal Reserve bank or branch is located. Member banks in other reserve cities submit reports on a weekly basis, while country banks submit reports on a semi-monthly basis.

Although the required reserve is a comparatively small proportion of the bank's resources, account must also be taken of excess reserves and of other items which form part of the working reserve of the bank, although not included in the legal reserve. Items 9 to 13 inclusive are of this sort. In addition, item 14 represents funds not yet available for

Form No. 202B
REVISED 4-18-38

TO FEDERAL RESERVE BANK OF PHILADELPHIA
REPORT OF NET DEPOSITS FOR PERIOD ENDING _____
 (OMIT CENTS ONLY)

DAY	DATE	GROSS DEMAND	DEDUCTIONS FROM GROSS DEMAND		TIME
		SEE ITEM 1 FORM B-12	DUE FROM BANKS SEE ITEM 2-A FORM B-12	CASH ITEMS IN PROCESS OF COLLECTION SEE ITEM 2-B FORM B-12	
		1	2	3	4
WEDNESDAY					
THURSDAY					
FRIDAY					
TOTAL					

	GROSS DEMAND	DEDUCTIONS (COLUMN 2 PLUS COLUMN 3)	NET DEMAND	TIME
TOTAL				
AVERAGE				

AVERAGE RESERVE REQUIRED

17½% OF AVERAGE NET DEMAND DEPOSITS		
5% OF AVERAGE TIME DEPOSITS		
TOTAL		

The deposit balances at the opening of business each day should be reported for that day.
 In the case of Sundays and holidays the deposit balances reported should be the balances as
 at the close of business on the preceding business day.

I CERTIFY THAT THE ABOVE FIGURES ARE CORRECT

 (NAME OF BANK)

 (LOCATION)

 (AUTHORIZED SIGNATURE)

§

This report is to be properly signed and forwarded promptly to the Federal Reserve bank of Philadelphia at the close
 of Friday of each week

FIG. 17. COMPUTATION OF RESERVE TO BE CARRIED WITH A FEDERAL RESERVE
BANK BY MEMBER BANK

lending or investment. Consequently, items 8 to 14 inclusive, which constitute the total working reserve, may be deducted from the bank's invested funds. The total of these items is \$23,965,637, or over 38 per cent of the bank's total resources.

It should be remembered, however, that the foregoing proportion is abnormally high. As a rule, bankers in the United States keep their reserve balances close to the mini-

num required by law and they also maintain balances with other banks at a much more moderate figure than that shown in the statement. The monetary and credit policies in the United States between 1932 and 1935 provided the banks with large amounts of funds, while the lack of demand for suitable loans and the scarcity of acceptable investments prevented the banks from utilizing these funds to the usual extent. As a consequence, excess reserves and "due from banks" are unusually large for the date shown in the statement.

Loans and investments.—The manner in which available funds are loaned or invested is not shown in detail in the statement under discussion. About the only thing that is clearly brought out in this connection is that "Loans (including overdrafts)" (item 1) amounts to roughly 41 per cent of "Total loans and investments," the six classes of securities listed (items 2 to 7 inclusive) making up the other 59 per cent.

As far as loans are concerned, however, some have been made in the open market, some represent advances to other banks, some are secured by stocks and bonds, some by real estate mortgages, and some are unsecured. It would obviously be of assistance in analyzing the statement if the "Loans" item were broken up into its component parts.

Such information is available for member banks in the *Annual Report of the Board of Governors of the Federal Reserve System* for 1940. A detailed statement of the loan account for December 31, 1940, shows the following utilization of funds in the extension of loans, either to customers or on the open market :

Loans Total	\$15,320,598
Commercial and industrial loans	6,203,515
Agricultural loans	865,091
Commercial paper bought in open market	371,473
Bills, acceptances, etc. payable in foreign countries	4,291
Acceptances of other banks, payable in United States	55,875
Reporting banks' own acceptances	74,418
Loans to brokers and dealers in securities	642,448
Other loans for purchasing or carrying securities	652,121
Real estate loans: On farm land	209,188
On residential property	2,118,475
On other properties	810,344
Loans to banks	43,106
All other loans	3,222,650
Overdrafts	7,603

This break-up gives us a much clearer idea of the state of the bank's loan account than could be obtained from the original statement.

With regard to investments similar detailed information is available in the *Annual Report*. The investment account, when split up, shows the following distribution of funds among different types of securities :

United States Government direct obligations—Total	\$12,337,408
Treasury bills	651,986
Treasury notes	2,594,260
Bonds maturing in 5 years or less	1,367,488
Bonds maturing in 5 to 10 years	2,885,694
Bonds maturing in 10 to 20 years	4,344,955
Bonds maturing after 20 years	493,016
Obligations guaranteed by United States Government—Total	3,485,638
<i>Total amount maturing in 5 years or less</i>	2,329,749
Reconstruction Finance Corporation	840,575
Home Owners' Loan Corporation	1,490,350
Federal Farm Mortgage Corporation	463,128
Other Government corporations and agencies	691,585
Obligations of Government corporations and agencies, not guaranteed by United States	
—Total	409,355
<i>Total amount maturing in 5 years or less</i>	377,700
Federal Land Banks	120,171
Federal Intermediate Credit Banks	164,414
Other Government corporations and agencies	205,770
Obligations of States and political subdivisions—Total	3,012,603
In default	6,735
Without specific maturity	220,432
Maturing in 5 years or less	1,788,648
Maturing after 5 years	996,878
Other bonds, notes, and debentures—Total	2,053,842
<i>Total amount in default</i>	55,000
<i>Total amount maturing in 5 years or less</i>	570,007
Railroads	701,663
Public utilities	409,920
Industrials	510,702
Other domestic corporations	147,774
Foreign - public and private	164,783
Corporate stocks—Total	416,533
Federal Reserve Bank	138,530
Affiliates of reporting banks	99,050
Other domestic banks	18,864
Other domestic corporations	157,077
Foreign corporations	1,494

Considering the statement as that of a single bank, our typical banking institution appears to be in a very liquid condition, and actually is so from the standpoint of the individual banker.

Acceptances.—The other significant items on the statement have to do chiefly with the acceptance business of the bank. It has already been explained (Chap. XV) that when a bank accepts drafts for its customers it becomes liable for the payment of these drafts at maturity. This liability is shown in the statement in item 37. The customers for whom the bank accepts the drafts, however, agree to furnish

the bank with funds to pay them at maturity. An asset account showing the customer's liability to the bank (item 18) is therefore carried as an offset to the bank's own liability arising from its acceptance of drafts. Ordinarily, these two accounts are identical in amount, but at times a customer may discharge his liability to the bank before an acceptance comes due, in which case the asset account is credited before the bank's liability has been discharged. This explains the difference between items 18 and 37 on the statement here used.

Illustrative statements.—Bank statements as actually published vary considerably as regards the degree of detail in which the items on the statement are presented. For purpose of illustration three statements are reproduced here. That of the Irving Trust Company is fairly detailed, that of the Mellon National Bank is very condensed, while that of the Corn Exchange Bank Trust Company is of a simplified type that any untrained person can understand.

IRVING TRUST COMPANY

NEW YORK

Statement of Condition, December 31, 1940

ASSETS		LIABILITIES	
Cash on Hand, and Due from Federal Reserve Bank and Other Banks	\$470,936,155.16	Deposits	\$776,679,710.85
United States Government Securities	164,449,300.10	Official Checks	5,009,037.12
Loans and Discounts	181,005,652.08	Acceptances	\$ 10,814,124.67
Stock in Federal Reserve Bank	3,088,100.00	Less Amount in Portfolio	7,792,753.84
State, County and Municipal Securities	4,575,000.00	Reserve for Taxes, Claims, etc.	974,642.28
Other Securities	4,532,782.46	Unearned and Deferred Income	1,596,793.98
First Mortgages on Real Estate	12,213,303.09	Dividend payable January 2, 1941	750,000.00
Headquarters Building	17,505,600.00	Other Liabilities	719,605.37
Other Real Estate	1,569,113.58	Capital Stock	\$50,000,000.00
Liability of Customers for Acceptances	1,251,397.88	Surplus and Undivided Profits	51,692,511.87
Accrued Income, Accounts Receivable, etc.	2,127,268.15		
	<u>\$893,343,672.50</u>		<u>\$893,343,672.50</u>

United States Government Securities are stated at amortized cost. Of these, \$14,000,382.47 are pledged to secure deposits of public monies and for other purposes required by law.

Member Federal Deposit Insurance Corporation

CORN EXCHANGE BANK TRUST COMPANY

ESTABLISHED 1853

A Bank Statement that any Man or Woman can Understand

OFFICERS

WALTER E. FREW
Chairman

DUNHAM B. SHERER
President

RALPH PETERS, JR.
First Vice-President

•

DIRECTORS

WALTER E. FREW

ROBERT A. DRYSDALE

DUNHAM B. SHERER

C. WALTER NICHOLS

GEORGE DOUBLEDAY

ETHELBERT IDE LOW

HENRY A. PATTEN

RALPH PETERS, JR.

JOHN H. PHIPPS

DAVID G. WAKEMAN

ERNEST M. BULL

JOHN H. McFADDEN, JR.

EDMUND Q. TROWBRIDGE

BRUNSON S. McCUTCHEEN

WILLIAM C. HOLLOWAY

Condensed Statement as of close of business

December 31, 1940

Due Individuals, Firms, Corporations and Banks	\$383,641,996.88
To meet this indebtedness we have:	
Cash in Vaults and Due from Banks . . .	\$184,233,374.16
Cash Items in Process of Collection . . .	25,417,731.88
U. S. Government Securities, less Reserve	106,689,843.75
<small>(Direct and fully guaranteed, including \$2,781,000 pledged to secure deposits and for other purposes as required by law)</small>	
Other Securities, less Reserve	40,167,082.98
18,000 sh. Federal Reserve Bank of New York	900,000.00
9,990 sh. Corn Exchange Safe Deposit Co.	761,500.00
Secured Demand Loans	16,533,235.58
Secured Time Loans	1,833,942.50
Loans and Discounts Unsecured, less Reserve	9,931,435.55
First Mortgages, less Reserve	17,236,229.43
Customers' Liability on Acceptances . . .	798,237.33
Banking Houses Owned, less Reserve . . .	11,655,118.92
Other Real Estate Owned, less Reserve. . .	1,940,689.42
Accrued Interest Receivable	827,875.88
Other Assets	72,261.33
Total to Meet Indebtedness	\$418,998,558.71
This Leaves	\$ 35,356,561.83

Capital, \$15,000,000.00;

Surplus and Undivided Profits, \$20,356,561.83

74 Branches located in all parts of the City of New York.

Member Federal Deposit Insurance Corporation

MELLON NATIONAL BANK

PITTSBURGH

STATEMENT OF CONDITION AT THE CLOSE OF BUSINESS
DECEMBER 31, NINETEEN HUNDRED FORTY

RESOURCES		LIABILITIES	
LOANS AND DISCOUNTS . . .	\$ 32,004,982.45	CAPITAL	\$ 7,500,000.00
OVERDRAFTS	4.47	SURPLUS	27,500,000.00
UNITED STATES OBLIGATIONS . .	208,985,798.71	UNDIVIDED PROFITS	2,877,472.77
OTHER BONDS AND INVESTMENTS .	13,266,298.08	RESERVES	11,204,434.84
BANKING HOUSE, FURNITURE AND FIXTURES	3,746,703.70	DEPOSITS	<u>408,423,504.11</u>
CASH AND DUE FROM BANKS . .	<u>201,800,624.31</u>		
	\$457,605,411.72		\$457,605,411.72

DIRECTORS

GEORGE A. BLACKMORE
RICHARD G. CROFT
ARTHUR V. DAVIS
CHILD S. FRICK
HOWARD HEINZ
ROY A. HUNT
BENJAMIN F. JONES, III

CHARLES LOCKHART
ALLEN W. McELDOWNNEY
PAUL MELLON
RICHARD K. MELLON
WILLIAM L. MELLON
LAWRENCE N. MURRAY
HENRY A. PHILLIPS

DAVID A. REED
WILLIAM C. ROBINSON
WILLIAM M. ROBINSON
ALAN M. SCAIFE
WILLIAM P. SNYDER, JR.
HARRY S. WHEARETT
CURTIS M. YONE

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

Comparative statement analysis.—From the point of view of the system of banks, a good deal of information may be obtained by a comparison of statements of groups of banks on a given date, or of the same group of banks on a series of different dates.

As an example of the first sort of comparison it is possible to distinguish country banks from reserve city and central reserve city banks by an examination of the combined statements of these three groups of member banks. Without reproducing the complete statements, the items which disclose the chief differences are given in Table X.

Since the total resources or liabilities of the three groups of banks are not far from equal on each of the selected dates, it is possible to make comparisons of the figures for the three different groups of banks on a given date directly without reduction to percentages. It is to be observed that the most striking differences are found between the country banks and the central reserve city banks, with the reserve city banks occupying a position between the two. As between central reserve city and country banks, it is clear that

BANK STATEMENTS

391

TABLE X

ITEMS FROM THE STATEMENTS OF MEMBER BANKS DECEMBER 31, 1928
AND DECEMBER 31, 1932
(In thousands of dollars)

	Central reserve city banks		Reserve city banks		Country banks	
	1928	1932	1928	1932	1928	1932
Loans.....	7,537,414	4,169,417	8,702,347	5,541,560	8,915,494	5,493,073
Investments.....	2,323,576	4,203,192	3,453,627	3,947,931	4,751,577	4,114,297
Cash in vault.....	78,414	64,373	167,273	126,473	318,697	231,992
Due from banks in U. S.....	248,126	409,108	899,258	1,239,605	976,858	766,943
Due from foreign banks.....	239,502	151,600	63,934	39,636	3,514	2,645
Due to banks in U.S.	1,541,351	1,841,180	1,680,614	1,503,241	427,072	263,228
Due to foreign banks	486,888	273,212	54,035	21,470	2,350	1,307
Demand deposits.....	6,748,224	5,507,956	6,034,666	4,280,757	6,120,768	3,604,522
Time deposits.....	1,826,601	1,255,858	4,832,306	4,217,439	6,794,404	5,076,282
Acceptances executed for customers.	700,366	376,004	212,882	51,324	15,081	2,410
National bank notes outstanding.....	39,390	21,315	161,234	268,087	449,260	487,347
Total resources or liabilities.....	16,284,182	11,700,667	16,007,322	12,645,703	16,644,142	11,913,556

Source: Annual Reports of the Federal Reserve Board, 1928 and 1932

the proportion of investments, cash in vault, due from banks in the United States, time deposits and national bank notes outstanding¹¹ is much higher for the latter than for the former group, while the proportion of due-from and due-to foreign banks, due to banks in the United States, demand deposits and acceptances executed for customers is decidedly higher for banks in central reserve cities. The reasons for these marked variations have been noted in various earlier connections and need not be dwelt on further at this point.

Comparisons in point of time are also possible to a limited extent from the table. The dates used were selected in order to show differences due to variation in business and financial conditions, the first date (December 1928) occurring in a period of decided prosperity, and the second (December 1932) representing practically the bottom of a severe depression. The falling off in loans for all groups of banks is especially marked, as might be expected in the circumstances. In the strong central reserve city banks, most of

¹¹ After 1935, of course, the retirement of national bank notes served to make the last comparison of historical interest only.

which were in an impregnable position, investments showed a marked increase from 1928, as is usual in a period of depression. The investments of reserve city banks, on the other hand, were but slightly larger in 1932 than in 1928, while those of the country banks were actually smaller. The explanation of this is probably that many country and some reserve city banks had lost deposits through withdrawals by customers and were hence not in a position to increase their investments as the large and more strongly entrenched city banks had done.

In times of depressed business, country banks ordinarily increase their balances with city correspondents and interior banks generally tend to build up their New York balances. The reserve city banks as a group followed the customary procedure during the great depression as shown by the fact that the item "due from banks in the United States" was markedly larger for this group in 1932 than in 1928. For country banks, however, the same item decreased in the interval. One explanation of this is to be found in the fact that the small country banks were, on the whole, most hardly hit by withdrawals by frightened depositors and had found it necessary to draw down their balances with correspondents in trying to meet these demands.

The depression in international business is clearly indicated by the striking decreases in due from foreign banks, due to foreign banks, and acceptances executed for customers on the part of the central reserve city banks between 1928 and 1932. The same items decreased in like fashion in the other two groups, but are not significant, even in prosperous times, with banks outside the central reserve cities.

Finally, national bank notes outstanding, although showing a decrease at central reserve city banks, increased substantially in the other two groups. This increase, which was permitted under a provision of the Home Loan Bank Act, doubtless reveals an effort on the part of some country and reserve city banks to meet the withdrawal of deposits by customers without liquidating investments.

Other comparisons might be drawn for this or some other period, but those noted will suffice to show to some extent the information which may be obtained from an analysis of

bank statements of condition as published in detailed form by the banking authorities.

The Federal Reserve Bank Statement.—The Board of Governors of the Federal Reserve System releases for publication each week statements of condition of each Federal Reserve bank and of the twelve Federal Reserve banks combined. Although the statement of a particular Reserve bank may be of interest upon occasion, the most significant information is usually found in the combined statement for all Reserve banks. Such a statement, showing the condition of these banks on December 30, 1939, is reproduced here (pp. 394-395). No central bank in any other country publishes a report of condition containing such a wealth of detail as this.¹² It is not possible here to enter into a detailed analysis of all of the items on the statement, most of which either have been considered in earlier chapters or are self-explanatory. Certain items, however, are particularly revealing of business and credit conditions and deserve further discussion.

Total bills and securities.—The item "total bills and securities" is significant in that it shows the total amount of reserve bank credit outstanding. It shows the extent to which the banking system is making use of Federal Reserve bank funds.¹³ Prior to 1930, if this item was increasing, it was indicative of increasing business activity, as an increase in business activity was usually accompanied by an increased demand for accommodation from member banks, the latter in turn finding it necessary to rely on the Reserve banks for additional funds. A decrease in total bills and securities, on the other hand, denoted a decrease in industrial and commercial activity.

Since 1930, however, the use of this item as an indicator of business activity has not been satisfactory. The loss of confidence in the banks in 1931-1933, for example, resulted in a withdrawal of hand-to-hand money which made reliance on the Reserve banks for accommodation necessary in a period when business was sharply depressed. Since 1933, excess

¹² The weekly statements are not quite as detailed as the one given here, but they contain a large amount of information nevertheless.

¹³ Actually there is a small item of float which also represents a use of Reserve bank credit, but it is not significant in the present connection. See p. 457 for an explanation of the existence of this float.

STATEMENT OF CONDITION OF THE FEDERAL RESERVE BANKS (IN DETAIL)

DECEMBER 30, 1939¹

ASSETS

Amounts in the column to the right are those shown in the Board's weekly statement, their components being shown in the column to the left. (In thousands of dollars)

Gold certificates with Federal Reserve agents	5,471,000
Gold certificates in interdistrict settlement fund with Board of Governors	8,417,676
Gold certificates held by banks	1,510,444
Gold certificates on hand and due from U. S. Treasury	15,109,120
Redemption fund—Federal Reserve notes	9,003
Total gold reserves	15,209,023
Other cash:	
United States notes	71,830
Silver certificates	223,070
Standard silver dollars	2,932
National and Federal Reserve bank notes	1,128
Subsidiary silver, nickels and cents	16,125
Total other cash	315,101
Total reserves	15,524,217
Bills discounted:	
Secured by U. S. Government obligations, direct and guaranteed	
Discounted for member banks	519
For others	25
Total secured by U. S. Government obligations, direct and guaranteed	574
Other bills discounted:	
For member banks	1,171
For others	5,020
Total other bills discounted	6,191
Total bills discounted	6,765
Industrial advances	11,011
U. S. Government securities, direct and guaranteed:	
Bonds	1,351,645
Notes	1,133,225
Total U. S. Government securities, direct and guaranteed	2,484,270
Total bills and securities	2,502,070
Due from foreign banks	47
Federal Reserve notes of other Reserve banks	33,454
Uncollected items:	
Transit items	813,755
Exchanges for clearing house	28,776
Other cash items	24,675
Total uncollected items	867,206
Bank premises	43,166
Other assets:	
Miscellaneous assets acquired account industrial advances	1,215
Industrial advances past due	2,565
Other bills and securities past due	1,834
Claims account closed banks	1,585
Total	7,200
Less reserves	4,446
Net	2,754
Interest accrued	8,551
Premium on securities	43,431
Deferred charges	608
Suspense account and miscellaneous assets	3,387
Total other assets	50,131
Total assets	19,029,300

¹ Before closing books at end of year.

BANK STATEMENTS

395

FEDERAL RESERVE BANKS (IN DETAIL)—Continued

LIABILITIES

Amounts in the column to the right are those shown in the Board's weekly statement, their components being shown in the column to the left. (In thousands of dollars)

Federal Reserve notes outstanding (issued to Federal Reserve banks)	5,274,522
Held by issuing Federal Reserve banks and branches	300,531
Forwarded for redemption	15,445
Federal Reserve notes in actual circulation (including notes held by Treasury and by Federal Reserve banks other than issuing bank)	4,958,546
Deposits:	
Member bank—reserve account	11,652,396
U. S. Treasurer—general account	634,245
Foreign bank	397,443
Other deposits:	
Nonmember clearing account	166,156
Officers' checks	34,564
Federal Reserve exchange drafts	137
All other	54,980
Total other deposits	255,837
Total deposits	12,039,021
Deferred availability items	776.665
Other liabilities:	
Accrued dividends unpaid	836
Unearned discount	6
Discount on securities	
Reserves for estimated losses on bills and securities	285
Suspense account and miscellaneous liabilities	2,287
Total other liabilities	3,414
Total liabilities	18,678,546

CAPITAL ACCOUNTS

Capital paid in	135,599
Surplus (sec. 7)	149,152
Surplus (sec. 13b)	27,264
Other capital accounts:	
Reserve for contingencies	32,665
Earnings:	
Gross earnings	38,501
Current expenses	28,647
Current net earnings	9,854
Add—profit and loss	4,110
Deduct:	
Dividends accrued since closing of books	8,110
Net earnings available for depreciation allowances, reserves and surplus	6,074
Total other capital accounts	38,739
Total liabilities and capital accounts	19,029,300

reserves have grown to such proportions that member banks have ceased to have to rely on the Reserve banks for accommodation regardless of the state of business. In fact, from 1934 to 1939 Reserve bank credit remained almost stationary while business fluctuated considerably. While the item in question is important it has no significance at present as a business indicator.

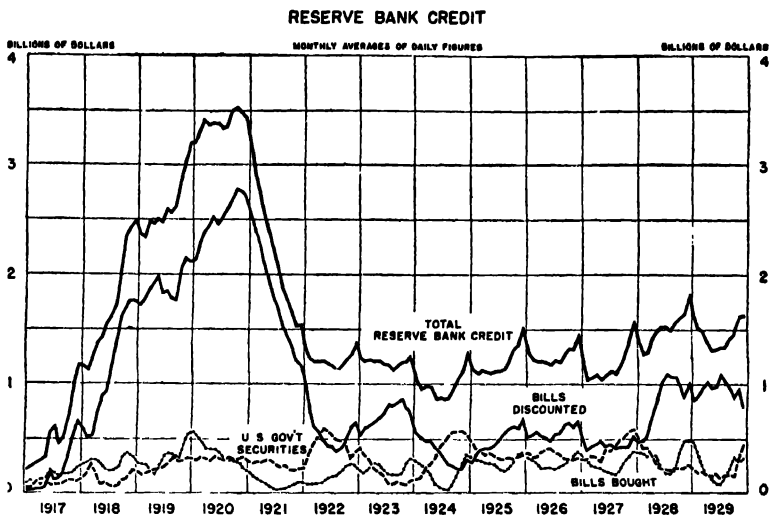
Total bills discounted.—One sub-item under the head of “total bills and securities” is “total bills discounted.” This shows the amount to which member banks are indebted to the Federal Reserve banks as a result of direct borrowing from those institutions. An increase in this item is accompanied by increasing money rates in the short-term open markets, as the member banks do not remain indebted to the Reserve banks for longer than necessary, and withdraw funds from the money markets to meet the demands of customers or to reduce indebtedness when their borrowings at the Reserve banks are large. A reduction in “total bills discounted,” conversely, is accompanied by easier money rates.

The relation between member bank indebtedness and money rates made this item a good indicator of short-term rates in the 'twenties. Of late years, however, the member banks have had such large excess reserves that they have been practically out of debt to the Reserve banks and the item is now of little significance.

Total United States securities bought outright.—The Federal Reserve banks buy bills and United States securities both outright and under re-sale agreements, and all such purchases put funds into the money market and enable member banks to repay indebtedness at the Reserve banks when such indebtedness exists. The only one of these transactions that is carried out on the initiative of the Reserve banks, however, is the outright purchase of United States securities. An increase in this item, therefore, is usually indicative of an intent on the part of the Reserve authorities to ease conditions in the money market, while a decrease is an indication of a policy of tightening rates in the short-term markets. From 1934 to 1939, money rates were extremely low and Federal Reserve bank holdings of government securities were almost constant.

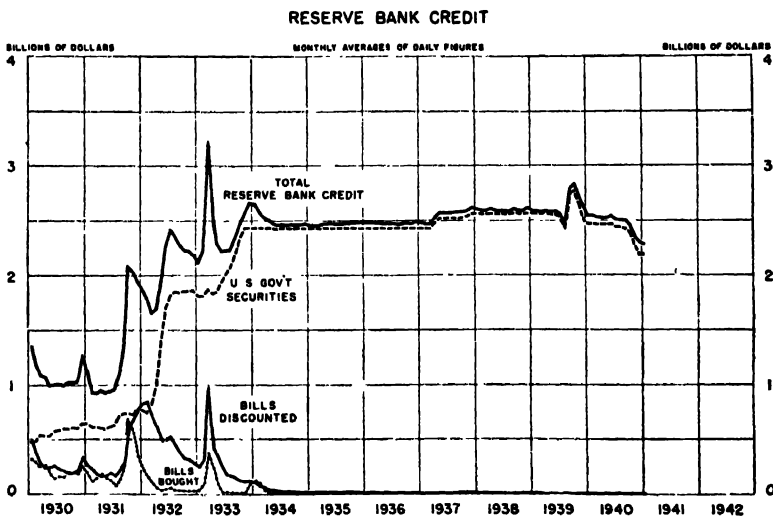
Beginning in 1939, the Reserve banks began the policy of buying and selling government securities with the purpose of preventing undue short-term fluctuations in the government bond market. These operations had no especial effect on short-term money rates, but were successful in maintaining considerable stability in the yields and prices of government bonds.

CHART IV



The relation to each other of the various items just considered during the period since 1917 is shown in the accompanying charts (Charts IV and V). It is clear from the charts that purchases in the open market were largely offset by reductions in member bank indebtedness in the pre-excess

CHART V



reserve era. Thus, as long as the Reserve banks purchased bills and securities in amounts smaller than member bank indebtedness, the total of Reserve bank credit was not increased in periods of declining business activity. Accordingly, the significance of open market purchases and sales lay in their effect on member bank indebtedness and money rates rather than in total Reserve bank credit outstanding. Since 1934, however, the member banks have been almost completely out of debt at the Reserve banks and such purchases and sales of government securities as have occurred have been practically solely responsible for variations in total Reserve bank credit outstanding.

Factors of increase and decrease in Reserve bank credit.—For a number of years, the Federal Reserve Board (now the Board of Governors of the Federal Reserve System) has compiled and published figures showing not only the amount of Federal Reserve credit outstanding, but also the factors which make for an increase or decrease of Reserve bank credit.¹⁴ The series included are shown in the accompanying table (Table XI). The items in the first five columns at the left are, of course, the components of Federal Reserve bank credit outstanding, together with the total. “Monetary gold stock” and “Treasury currency outstanding” are factors of decrease in Reserve bank credit in the sense that an increase in either of these items adds to the funds available to member banks which may be substituted for Reserve bank credit.

To illustrate, suppose that member banks are indebted to the Reserve banks in the amount of \$500,000,000 and that the monetary gold stock increases, as a result of gold imports, by \$300,000,000. Upon receipt of this gold, it would be deposited with the Federal Reserve banks by the member banks receiving it, or, under present conditions, would be sold to the Treasury and the funds thus obtained would be deposited with the Reserve banks. In any event, the first effect would be to increase member bank reserve balances, leaving Reserve bank credit unchanged. But the member banks, being in debt at the Reserve banks, would in all proba-

¹⁴ These figures were first currently published in July 1929, being carried back to 1918. For a detailed analysis of same, see the *Federal Reserve Bulletin*, July 1929, and W. W. Riefler, *Money Rates and Money Markets in the United States*.

BANK STATEMENTS

399

TABLE XI

MEMBER BANK RESERVE BALANCES, RESERVE BANK CREDIT, AND RELATED ITEMS
—END OF YEAR 1918-1939 AND END OF MONTH 1939

[In millions of dollars]

End of year or month	Reserve bank credit outstanding					Gold stocks ²	Treasury currency outstanding ³	Money in circulation	Treasury cash holdings ⁴	Treasury deposits with F. R. banks	Non-member deposits ⁵	Other Federal Reserve accounts ⁶	Member bank reserve balances	
	Bills discounted	Bills bought	U. S. Government securities	Other reserve bank credit ¹	Total								Total	Excess ⁷
1918	1,766	287	230	206	2,498	2,875	1,795	4,951	288	51	121	118	1,636	51
1919	2,215	574	300	203	3,292	2,707	1,707	5,091	385	31	101	208	1,800	68
1920	2,687	260	287	120	3,355	2,039	1,709	5,325	218	57	23	298	1,781	
1921	1,144	145	234	40	1,563	3,373	1,842	4,403	214	96	27	285	1,753	99
1922	618	272	436	79	1,405	3,642	1,958	4,530	225	11	20	276	1,934	
1923	723	355	134	27	1,238	3,957	2,009	4,757	213	38	23	275	1,868	14
1924	320	387	540	54	1,302	4,212	2,025	4,760	211	51	30	258	2,220	50
1925	643	374	375	67	1,459	4,112	1,977	4,817	203	16	20	272	2,212	—44
1926	637	381	315	49	1,381	4,205	1,991	4,808	201	17	65	293	2,104	—56
1927	582	302	617	34	1,655	4,092	2,006	4,716	208	18	26	301	2,487	63
1928	1,056	480	228	65	1,809	3,854	2,012	4,686	202	23	27	348	2,380	—41
1929	612	302	511	48	1,583	3,907	2,022	4,578	216	20	30	393	2,355	—73
1930	251	364	729	29	1,373	4,306	2,027	4,360	211	10	28	375	2,471	96
1931	638	339	817	59	1,853	4,171	2,035	5,366	222	54	110	354	1,901	—33
1932	235	33	1,855	22	2,145	4,220	2,204	5,388	272	8	43	355	2,599	576
1933	98	133	2,437	20	2,668	4,030	2,303	5,519	284	3	132	300	2,729	859
1934	7	6	2,430	20	2,463	8,218	2,511	5,536	3,029	121	180	241	4,096	1,814
1935	5	5	2,431	45	2,486	10,125	2,476	5,882	2,566	544	255	253	5,587	2,844
1936	3	3	2,430	64	2,500	11,258	2,532	6,543	2,376	244	259	261	6,606	1,984
1937	10	1	2,564	38	2,612	12,760	2,637	6,550	3,619	142	407	263	7,027	1,212
1938	4	1	2,564	33	2,601	14,512	2,708	6,856	2,706	923	441	260	8,724	3,205
1939-Jan	4	1	2,574	28	2,607	14,682	2,816	6,653	2,776	747	458	255	9,215	3,644
Feb.	4	1	2,561	30	2,598	14,874	2,824	6,731	2,740	1,148	488	254	8,935	3,387
Mar.	4	1	2,564	18	2,587	15,258	2,839	6,817	2,691	1,229	533	257	9,157	3,559
Apr.	3	1	2,571	20	2,595	15,701	2,840	6,905	2,600	931	345	255	9,903	4,008
May	4	1	2,574	4	2,578	15,957	2,862	6,967	2,630	920	586	253	10,567	4,218
June	5	1	2,551	23	2,579	16,110	2,881	7,047	2,593	944	739	258	10,078	4,140
July	5	1	2,488	—8	2,486	16,238	2,895	7,040	2,600	752	903	257	10,567	4,553
Aug.	5	1	2,426	14	2,446	16,646	2,907	7,171	2,325	708	622	255	10,016	4,758
Sept.	6	1	2,804	68	2,879	16,932	2,919	7,293	2,244	545	753	249	11,655	5,352
Oct.	6		2,736	50	2,801	17,091	2,932	7,312	2,254	286	728	247	11,073	5,553
Nov.	8	2	2,552	80	2,650	17,358	2,917	7,483	2,307	419	810	247	11,628	5,160
Dec.	7	2	2,481	102	2,593	17,614	2,963	7,508	2,400	611	613	251	11,653	5,200

¹ Includes Government overdrafts in 1918, 1919, and 1920; includes industrial advances outstanding since July 1934.

² By proclamation of the President, dated January 31, 1934, the weight of the gold dollar was reduced from 25 7/8 grains to 16 2/3 grains, nine-tenths fine. Between January 31, 1934, and February 1, 1934, the gold stock increased \$2,985,000,000, of which \$2,806,000,000 was the increment resulting from the reduction in the weight of the gold dollar and the remainder was gold which had been purchased by the Treasury previously but not added to the gold stock. The increment was covered into the Treasury as a miscellaneous receipt, and appeared together with the new gold as a General Fund asset. These transactions were also reflected in an increase in the item "Treasury cash." The increment arising from United States gold coin turned in by the public after January 31, 1934, was also added to both gold stock and Treasury cash at the time of receipt. The increment from this source amounted to about \$7,000,000, from February 1 to December 31, 1934, to about \$1,000,000 in 1935, to \$1,800,000 in 1936, to \$1,200,000 in 1937, to \$500,000 in 1938, and to \$350,000 in 1939.

³ Comprises outstanding United States notes, national bank notes, silver bullion, Treasury notes of 1890, standard silver dollars, subsidiary silver and minor coin, and the Federal Reserve bank notes for the retirement of which lawful money has been deposited with the Treasurer of the United States, including the currency of these kinds that is held in the Treasury and the Federal Reserve banks as well as that in circulation.

⁴ Cash (including gold bullion) held in the Treasury excepting (a) gold and silver held against gold and silver certificates and (b) amounts held for the Federal Reserve banks.

⁵ Item includes all deposits in Federal Reserve banks except Government deposits and member bank reserve balances.

⁶ This item is derived from the condition statement of the Federal Reserve banks by adding capital, surplus, other capital accounts, and "other liabilities, including accrued dividends," and subtracting the sum of bank premiums and "other assets."

⁷ Represents excess of total reserve balances over reserves required to be held by member banks against their deposits. Figures not available prior to 1920 except on call dates, and since April 1938 are for licensed member banks only.

bility use this \$300,000,000 addition to their reserve balances to retire a like amount of indebtedness. In this case, bills discounted would decrease \$300,000,000, and Reserve bank credit outstanding would be correspondingly reduced.

It is important to point out that increases in either monetary gold stock or Treasury and national bank currency will not necessarily result in a decrease of Reserve bank credit outstanding. It is proper to term these items factors of decrease in Reserve bank credit, however, since, if either of them does increase, Reserve bank credit must decline in amount or one of the other factors must increase. For example, in the foregoing illustration, if member banks had not reduced their indebtedness at the Reserve banks, the increase in monetary gold stock would have been offset by a corresponding increase in member bank reserve balances. This may be summed up by saying that, on the assumption of *no change* in the other factors noted, an increase in monetary gold stock or Treasury and national bank currency¹⁵ will result in a decrease in Federal Reserve bank credit outstanding.

The remaining factors—money in circulation, member bank reserve balances, Treasury cash and deposits with Federal Reserve banks, non-member deposits, and other Federal Reserve accounts—may all be considered as factors of increase in Reserve bank credit, because an increase in any one of these items, again on the assumption that the other items remain unchanged, will result in an increase in Reserve bank credit outstanding.

Consider, for example, an increase in money in circulation. This increase might be attained, without any change in Reserve bank credit, by an increase in monetary gold stock or Treasury and national bank currency, or by a decrease either in Treasury cash and deposits with Federal Reserve banks or in member bank Reserve balances. If these items remain unchanged, however, either the Reserve banks would have to buy bills or securities or member banks would have to discount paper at the Reserve banks. In other words, Reserve bank credit would have to increase.

¹⁵ Since the retirement of national bank notes, begun in 1935, this item is termed merely "Treasury Currency," as indicated in the table.

It goes without saying that a decrease in monetary gold stock or Treasury and national bank currency, barring any change in other factors, would necessitate an increase in Reserve bank credit, and that a decrease in any of the other factors would be accompanied by a decrease in Reserve bank credit on the same assumption.¹⁶

The value of these data for the student of banking is obvious. Given a change in Reserve bank credit outstanding and it is possible from an analysis of changes in the factors of increase and decrease to ascertain the cause of the change in Reserve bank credit in an exact degree.

To illustrate, let us consider a period of violent change in the credit situation, covering the departure of England from the gold standard in 1931. The figures are given below:

<i>(Figures in millions of dollars)</i>		
Reserve bank credit outstanding :	July 1931	October 1931
Bills discounted	195	728
Bills bought	73	681
U. S. Government securities	678	727
Other Reserve bank credit	30	48
	<hr/>	<hr/>
Total	976	2184
Factors of decrease :		
Monetary gold stock	4662	4005
Treasury and national bank currency	2024	2024
Factors of increase :		
Money in circulation	4550	5253
Treas. cash and deposits in F.R.B.	237	257
Non-member deposits	140	181
Member bank reserve balances	2367	2167
Other Federal Reserve accounts	369	356

Total Reserve bank credit increased by \$1,208,000,000 during the three months in question, the increase resulting largely from a sharp rise in bills discounted and bills bought. An analysis of changes in the factors of decrease and of increase shows why such a large rise in Reserve bank credit

¹⁶ Space is lacking to illustrate in detail the effect of changes in every one of the factors mentioned. Those interested in a more detailed analysis are referred to the sources cited in the preceding footnote.

outstanding was necessitated. Such an analysis is given herewith :

	<i>Changes in factors making for an in- crease in reserve bank credit</i>	<i>Changes in factors making for a de- crease in reserve bank credit</i>
Monetary gold stock	657	
Treasury and national bank currency		no change
Money in circulation	703	
Treas. cash & deposits with F.R. bank	20	
Non-member deposits	41	
Member bank reserve balances		200
Other Federal Reserve accounts		13
	<hr/>	<hr/>
	1421	213
Excess of changes making for increase	1208	

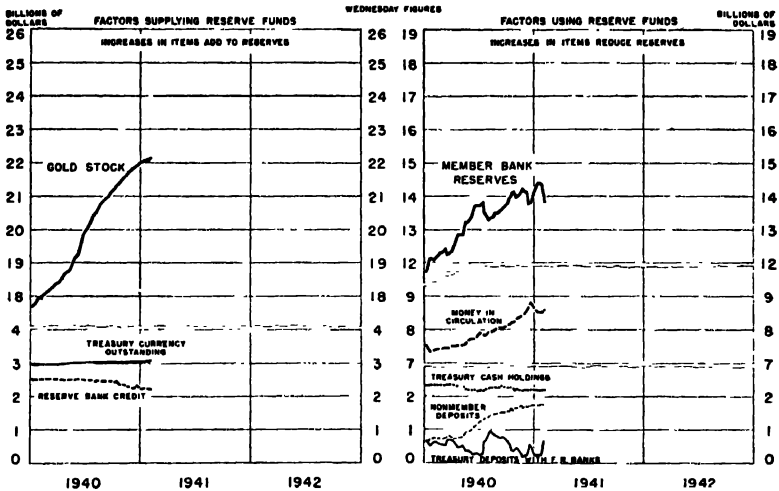
The last figure is, of course, the amount by which Reserve bank credit outstanding actually increased during the three months.

Another, and somewhat simpler way of looking at the problem is to consider it from the standpoint of the supply and uses of funds. The total supply of funds available consists of total Reserve bank credit, monetary gold stock and Treasury currency. The remaining six items show the uses to which these funds are put. The two totals are bound to be equal. Thus, in the preceding example, if we are given Total Federal Reserve bank credit for July 1931, and all the other factors except Reserve bank credit for October 1931, the increase between the two dates can be readily computed as follows :

<i>(Figures in millions of dollars)</i>	October 1931
Monetary gold stock	4005
Treasury and national bank currency	2024
Total	<hr/> 6029
Money in circulation	5253
Treas. cash and deposits in F.R.B.	257
Non-member deposits	181
Member bank reserve balances	2167
Other Federal Reserve accounts	<hr/> 356
Total	<hr/> 8214

CHART VI

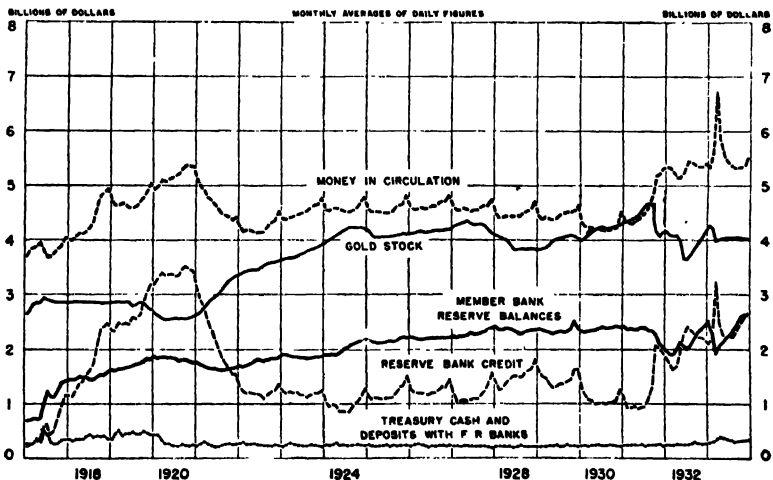
MEMBER BANK RESERVES AND RELATED ITEMS



Subtracting 6029 from 8214 gives us 2185, the amount of Federal Reserve bank credit outstanding in October 1931. Subtracting 976 from this total, we obtain an increase of 1209 between July and October. (Note: The difference of 1 obtained by the use of the two methods is accounted for by

CHART VII

MEMBER BANK RESERVES AND RELATED ITEMS



the fact that the figures are given to the nearest million dollars. If exact figures were used, the result would be the same by either method.) Chart VI, reproduced herewith, shows the supply and use factors of reserve funds during 1940.

A chart showing total Reserve bank credit and the more important of the factors of increase and of decrease is published in the *Federal Reserve Bulletin* and in the Federal Reserve Chart Book. Two charts from the latter source showing changes in the various items from 1917 to 1933 and from 1930 to 1941 are reproduced here (Charts VII and VIII). Reserve credit during the Great War, the results of hoarding during the depression, the banking crisis of 1933, the devaluation of the dollar and the succeeding heavy imports of gold (matters discussed in various other chapters) are here depicted clearly in graphic form. The course of excess and required reserves since 1930 is also shown in Chart IX from the same source.

BANK EXAMINATIONS AND SUPERVISION

The need for bank examinations.—A consideration of public bank supervision in various countries discloses the fact that this practice is more highly developed in the United States than in the great majority of foreign countries. There has been government inspection of banking in Canada since the failure of the Home Bank in 1923 and in Germany since the crisis of 1931, but many European countries have no system of examinations for their commercial banks.

The explanation of this difference in practice between the United States and the majority of other countries is to be found in our far-flung system of unit banks, many of them of small size and not too competently managed. In a system of this sort bank examinations are essential to the reasonably sound operation of banking institutions. The fact that approximately 7000 banks in the United States failed in the decade just prior to the depression, however, shows that the practice of bank examinations, as carried out in this country, was by no means complete assurance against unsound banking procedure. This was due partly to the type of examination conducted under certain jurisdictions and partly to the fact

CHART VIII

MEMBER BANK RESERVES AND RELATED ITEMS

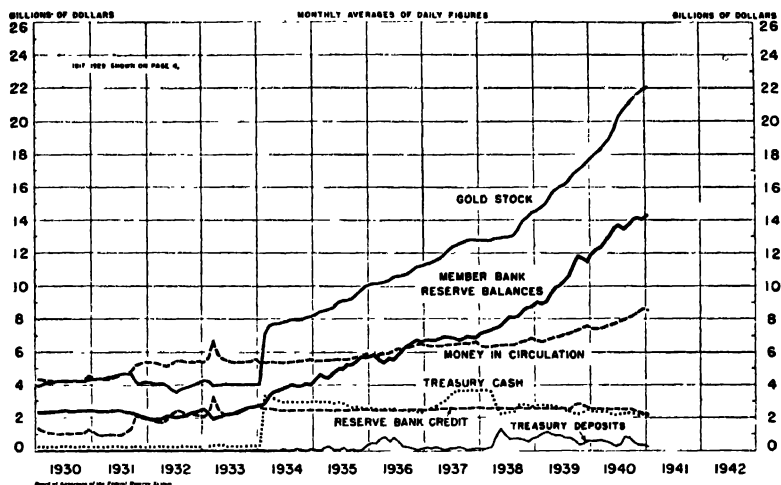
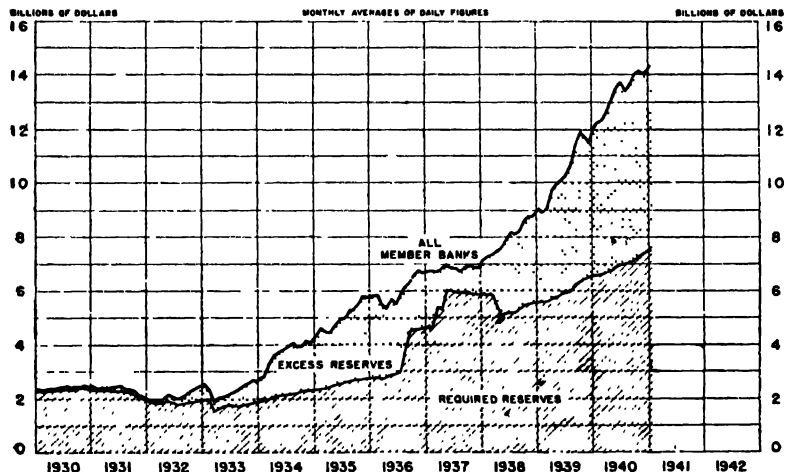


CHART IX

REQUIRED AND EXCESS RESERVES OF MEMBER BANKS



that no system of examinations, however efficient, can offset the effects of incapable and inefficient management.

In other words, with sound, honest and able bank management, examinations would be unnecessary. It is nevertheless true that careful and thoroughgoing bank examinations may help to improve the character of bank management

as evidenced by the fact that, in the long series of suspensions during the decade prior to the depression, member banks, which were under relatively efficient supervision, were less subject to failure than non-member institutions.¹⁷

The development of bank supervision in the United States.—It is unnecessary here to dwell at length on the historical development of bank supervision and examination in this country, as the pertinent facts have been related in earlier chapters.¹⁸ In the period prior to the Civil War, state supervision of banks was either lacking entirely or conducted with varying degrees of inefficiency. Toward the close of the period bank examinations by state boards or supervisors became fairly common and some of the examining authorities¹⁹ performed their tasks with a high degree of ability. Nevertheless, the process of bank supervision could not be said to have attained a high degree of development prior to the establishment of the national banking system.

The National Bank Act created the office of Comptroller of the Currency and gave its incumbent wide supervisory authority over national banks. Since the national banking system almost completely displaced the systems of state banks for a number of years, the banking system was for a time under unified supervision. Since the Comptroller of the Currency, through his staff, conducted rather searching examinations of national banks, it may be stated that, during the period 1866-1880, banking supervision was carried on in a satisfactory fashion in the American banking system.

With the recrudescence of state banking, which began in the eighties, bank supervision assumed a less satisfactory aspect. The Comptroller of the Currency, having no authority over state institutions, was not in a position to assure sound examinations of any but national banks. Supervision of state banks, on the other hand, developed slowly and, although practically all states had bank examiners by 1913, the intensity and quality of the examinations conducted varied decidedly in different parts of the country. In some

¹⁷ See Table XXVII, p. 630.

¹⁸ See especially Chapters VI, VII, and VIII.

¹⁹ E.g., in Louisiana under the banking law of 1842.

states the supervision compared very favorably with that of national banks, but in others it was so lax as to be of little benefit.

During the period prior to the establishment of the Federal Reserve system, public supervision of banks was supplemented in some of the larger cities by self-imposed examinations conducted through the local clearing house associations. While the majority of these examinations were highly efficient, it is clear that the number of banks involved was but a small minority of all the banks of the country.

Lack of uniformity.— Just as the diversity of laws and jurisdictions has impeded banking development generally in the United States, the lack of uniformity in the matter of supervision has prevented the attainment of an efficient system of examinations for all the banks of the country. Since the latter part of the nineteenth century, therefore, the major problem involved in the question of bank examination has been the attainment of a system of uniform examinations of high caliber for all banks.

With the establishment of the Federal Reserve system, progress was made in improving the examinations of some state banks. The Federal Reserve agent in each Reserve bank was required to examine the state member banks in his district, national bank examinations continuing under the jurisdiction of the Comptroller of the Currency as before. This did not greatly improve matters for a time, but after the influx of state banks into the Federal Reserve system in 1917, a considerable improvement resulted among state member banks in certain states in which the examinations conducted by the state authorities were not satisfactory. In practice, the Federal Reserve agents accepted the examinations of the state authorities where these were of sufficiently high grade, but conducted their own examinations where those carried out by the state were deemed to be inadequate.

Another step toward improvement in state bank examinations resulted from the provisions of the Banking Act of 1933 which required the management of groups and chains of banks to permit the examination of non-member banks in the group by the Federal Reserve authorities in order to obtain a voting permit. The examining activities of the

Federal Reserve banks in 1934, after these provisions went into effect, are summarized in the following quotation from the *Annual Report of the Federal Reserve Board* for that year :²⁰

"Under the provisions of the Federal Reserve Act State member banks are subject to examinations made by direction of the Federal Reserve Board or of the Federal Reserve banks by examiners selected or approved by the Federal Reserve Board. The examinations of State member banks made under the provisions of the Federal Reserve Act are made by examiners for the various Federal Reserve banks, whose appointments are approved by the Federal Reserve Board and who work under the direction of the Federal Reserve agents. The policy approved by the Federal Reserve Board provides that at least one regular examination of each State member bank, including its trust department, be made during each calendar year by examiners for the Federal Reserve banks, either independently or jointly with State banking authorities.

"In order to avoid duplication of examinations and minimize any inconvenience to the banks examined, most of the examinations of State member banks made by examiners for the Federal Reserve banks were joint examinations made in cooperation with the State banking authorities.

"In connection with the consideration of applications of holding company affiliates for voting permits, arrangements were completed, wherever practicable, to have the various banks controlled by the same holding company affiliate examined as nearly as practicable as of the same date in order that a comprehensive picture of the entire group might be obtained and information concerning various relationships within the group be developed. Such arrangements were worked out in cooperation with the chief national bank examiners in the various districts and the State banking authorities, the national banks being examined by the national bank examiners and the State banks by the State authorities and examiners for the Federal Reserve banks.

"During 1934 a conference was held in Washington of the Assistant Federal Reserve agents in charge of examinations for the Federal Reserve banks, the chief examiners and the trust examiners for the Federal Reserve banks, and representatives of the Federal Reserve Board. The conference was called at the request of the Federal Reserve Board in order that those in charge of the examination work for the Federal Reserve banks and the representatives of the Board in Washington might consider together the questions involved in the examination of the State member banks and that the examination activities of the various Federal Reserve banks might be further coordinated and a more uniform procedure developed."

Extension of Federal examining powers.— In spite of the activities of the Reserve banks in examining state institutions,

²⁰ Pr. 54-55.

as just outlined, many thousands of non-member state banks still operated outside the scope of Federal examinations. This situation was drastically altered by the institution of deposit insurance in 1934. The Federal Deposit Insurance Corporation perforce had to have full information regarding the soundness of banks desiring to have their deposits insured. As regards member banks of the Federal Reserve system, adequate data from the reports of the Federal Reserve agents and the Comptroller of the Currency were available. Since non-member banks could participate in the insurance plan, however, the F.D.I.C. was given broad powers in the examination of such institutions.

The extent to which this authority increased Federal supervision of state banks was very substantial. On December 30, 1939, 13,535 banks out of a total of 15,037 banks in the country were insured. Of the uninsured banks, 501 were mutual savings banks, only 51 of which were insured with the F.D.I.C., leaving but 1001 uninsured commercial banks, as compared with 7,082 non-member commercial banks, which were insured and which hence came under the examining jurisdiction of the Corporation.

Quite apart from the question of the desirability of deposit insurance as such, the F.D.I.C. has undoubtedly performed a valuable service in connection with its examining activities. Not only do they tend toward improvement in the operation of non-member banks, but the publication of the results furnishes the student of banking with data for the overwhelming majority of non-member banks in a form not previously obtainable for these institutions.

Desired reforms.—In spite of the increase in the scope of Federal supervision as a result of the institution of deposit insurance, some reforms are still to be desired. In the first place, it would seem logical and helpful to concentrate the examining activities of the Comptroller of the Currency, the Federal Reserve agents (and the Board of Governors of the Federal Reserve System), and the F.D.I.C. in the hands of a single supervisory authority. One possible course of action would be to establish a Federal Bank Examination Board, under the jurisdiction of the Board of Governors, to undertake the task of bank examination for all insured

banks, including national and state member as well as non-member institutions. The chairman of such a Board, were it established, would naturally supplant the Comptroller of the Currency, whose office might then well be abolished.

Possibly a simpler solution to the problem would be to concentrate all Federal examining powers in the hands of the F.D.I.C., which might properly examine all insured banks including national and state member institutions. It is true that there is satisfactory co-operation among the different existing Federal authorities, but a concentration of power would eliminate duplication of facilities and should lead to a reduction in the expense of conducting examinations as far as total expenditure is concerned.

While this is the simple solution, the author feels that the first suggestion would be more appealing to the Board of Governors of the Federal Reserve System. The Board apparently feels that upon occasion, in spite of a substantial degree of co-operation, the difference in attitude between the Board and the other agencies may have interfered with the Board's credit policy. This is to be inferred from the following quotation from the Board's *Annual Report* for 1938 :²¹

"Diffusion of authority has also been responsible for difficulties in establishing uniform policies in connection with bank examinations. While a voluntary agreement has been worked out between the three principal Federal supervisory agencies—the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Board of Governors—the permanence of this arrangement depends on continuous agreement between the agencies on the policies involved, and its effectiveness depends upon a uniform interpretation of the policies adopted. The interpretation, however, may vary from time to time in accordance with the points of view of those responsible for the policies of the three agencies.

"The Board wishes to raise a broad question as to the relationship that should exist between general credit policies and policies pursued in the examination and supervision of banks. There have been times in the past when these policies have worked in opposite directions, with a consequent aggravation of deflationary and inflationary trends."

A second desirable reform would be to place bank examiners under the Civil Service and to require them to pass rigid examinations as a pre-requisite to their appointments.

²¹ P. 4. Later pages of the *Report* contain a full discussion of the problem.

In this connection, it should be noted that salaries should be sufficiently high to attract and retain high-grade men in the field. With surety of tenure and adequate remuneration for members of the examining staff, it would be reasonable to suppose that the quality of bank examinations might be substantially improved, although Federal examinations at present appear to be of a fairly high caliber.

Conclusion.—Despite the fact that adequate and unified bank examinations are necessary and desirable in a banking system such as that of the United States, it cannot be too much emphasized that bank supervision is not and can never be a substitute for sound bank management. The best that efficient supervision can do is to prevent fraud and illegal practices and, by suggestion and instruction, do something to improve the management in cases where it is notably inferior.

A natural sequel to a study of bank statements and examinations is a consideration of bank earnings and expenses, since it is the relation of these two factors which generally determines both the soundness and profitability of a banking institution. Accordingly, the following chapter will be concerned with these important phases of bank operation.

REFERENCES

(The following references are for Chapters XIX and XX)

- Jamieson, C. L. *Management of Unit Banks.* Ann Arbor. 1931.
Schwulst, E. B. *The Extension of Bank Credit*, Chapter X.
Annual Reports of the Board of Governors of the Federal Reserve System.
Annual Reports of the Comptroller of the Currency.
Federal Reserve Bulletin.
Commercial Bank Management. (American Bankers Association.)
Survey of Bank Operating Ratios. (American Bankers Association.)

CHAPTER XX

BANK EARNINGS AND EXPENSES

Importance of profits.—From the point of view of the individual banker, the purpose of the bank is to earn profits for the shareholders. The bank which is unable to do this with a considerable degree of regularity is a failure. From the standpoint of the public, the purpose of the bank is to provide a safe depository for surplus funds, to extend credit to its customers, and to perform certain services in connection with the transfer of deposits from place to place, etc. In the case of savings deposits, the depositor utilizes the bank as a medium of investment as well as a safe depository. Chief emphasis is placed on safety, however, in both savings and commercial banking, as evidenced by the bulk of banking legislation.

Although these two viewpoints appear to be somewhat opposed to each other at first glance, they are in fact quite the reverse. If a bank is to be profitable in the long run, it will necessarily have to be managed in a safe and sound fashion which offers protection to the interests of the depositors. Losses from unsatisfactory loans and investments—which form one important cause of bank failures—are decidedly unprofitable. It is at times true, of course, that banks may fail when their investments are essentially sound but lack the requisite liquidity to meet the demands of depositors who wish to withdraw their funds. In these circumstances, if the customers would refrain from demanding their deposits, the bank might continue profitably in business. But since depositors have the right to withdraw their funds at any time, liquidity is itself a prerequisite to continuous profitable operation. By and large, therefore, profitable operation and safe operation go hand in hand. The bank that is not able to conduct its business in a profitable manner will not long be safe.

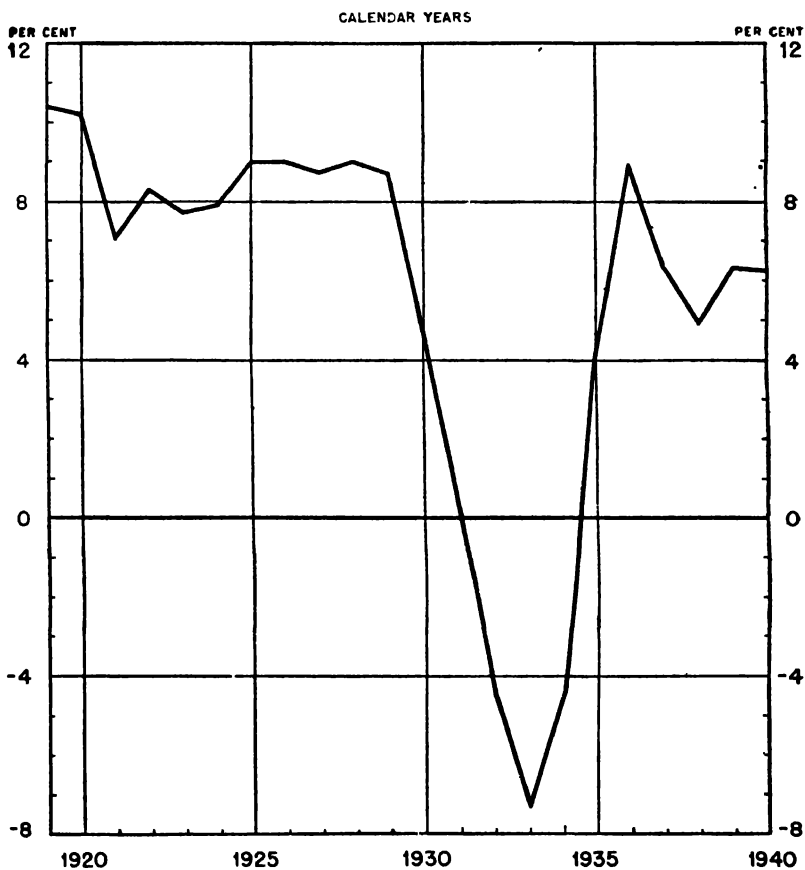
BANK EARNINGS AND EXPENSES 413

Alteration of the problem.—The problem of conducting a profitable banking business has changed considerably during the past decade or so. The major reason for this consists of the easy money policy which has greatly reduced the yield from both loans and discounts and investments. Income has thereby been reduced, but, on the other hand, the banks have managed to find new sources of income from

CHART X

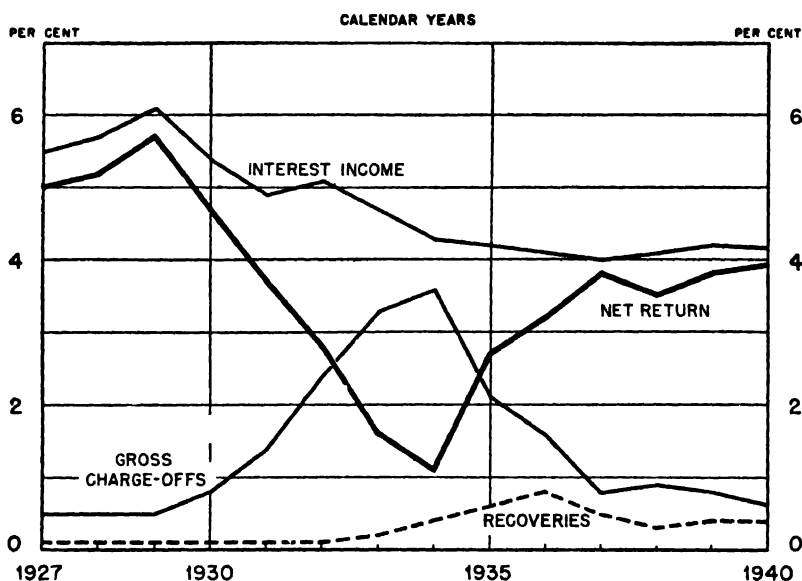
MEMBER BANK PROFITS ¹

AS A PERCENTAGE OF TOTAL CAPITAL ACCOUNTS



¹ This and the following two charts are reproduced with the kind permission of Mr. Roland I. Robinson who prepared them for the Division of Research and Statistics of the Board of Governors of the Federal Reserve System. Similar charts through

CHART XI
INCOME FROM LOANS
 AS A PERCENTAGE OF TOTAL LOANS



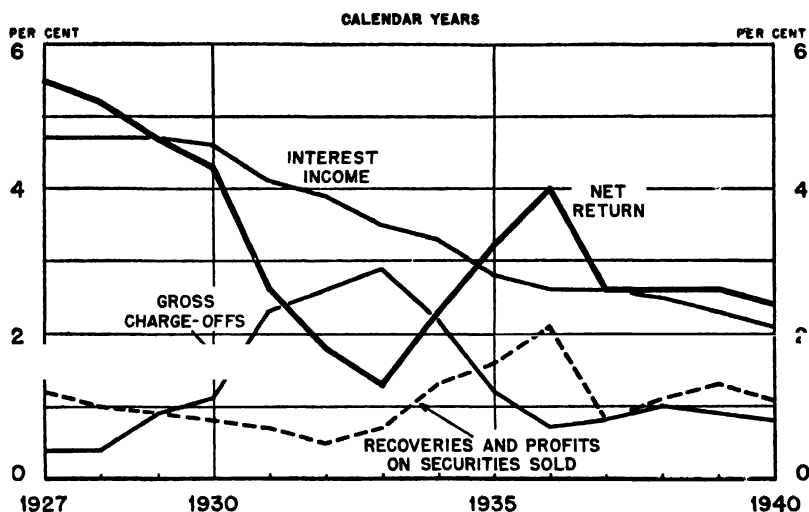
service charges, etc. Consequently, the general level of profits is not greatly below that of the (for banking) prosperous 'twenties, as indicated in Chart X on page 413. The extremely rapid increase in profits from 1933 to 1936 is explained in large part by recoveries on loans and securities following the depression, as shown by Charts XI and XII. This was naturally a temporary phenomenon, but profits since 1936 may be considered as about the height to be expected under current conditions. However, before proceeding with the question, a detailed analysis of earnings and expenses is desirable.

Earnings.—To operate profitably a bank must receive more in the way of income than it expends in carrying on its business. Normally the bank's chief income is the yield derived from loans and discounts. Next in importance ranks interest (or dividends) received from securities owned. This is still the case in spite of the declining trend of loans as compared with investments in the last two decades. Vari-

1939 appeared in Mr. Robinson's article entitled "Trend of Member Bank Earnings and Profits" in the *Federal Reserve Bulletin*, May 1940.

CHART XII

INCOME FROM SECURITIES AS A PERCENTAGE OF TOTAL SECURITIES



ous smaller amounts of income may also be received from exchange charges, service charges, fees and miscellaneous sources.² For the general run of banks, all of these latter items together, however, are far less significant than earnings from either loans and discounts or securities. The relative importance of the different sources of income mentioned is shown in the following table:

TABLE XII: BANKING INCOME PER \$100 OF DEPOSITS
ALL INSURED COMMERCIAL BANKS—1939

Interest and discount on loans	\$1.30
Interest and dividends on securities . . . . .	.93
Service and collection charges, fees, etc. . . . .	.22
Other . . . . .	.42

Total \$2.87

Source: *Earnings and Expenses of All Insured Commercial Banks 1939*, Bank Management Commission of the American Banking Association.

² Income of the latter sort varies a great deal from bank to bank. For example, such income for insured commercial state banks having deposits under \$100,000 amounted to \$1.42 per \$100 of deposits as compared with \$0.22 for all insured banks. These small banks have a much higher proportional income from exchange charges than many of the larger institutions. The foregoing data are from *Earnings and Expenses*

Expenses.—Banking expenses consist of interest paid on deposits and for money borrowed, salaries, wages and fees, taxes, and miscellaneous expenses. The proportion of expenses going to each of these in 1939 is shown in the following tabulation :

TABLE XIII
BANKING EXPENSES PER \$100 OF DEPOSITS
ALL INSURED COMMERCIAL BANKS—1939

Interest on deposits	\$.38
Salaries, wages and fees . . . . .	.87
Taxes . . . . .	.19
Other . . . . .	.56
Total	\$2.00

Source : *Earnings and Expenses of All Insured Commercial Banks 1939*, Bank Management Commission of the American Banking Association.

If we subtract the total current expenses from total current earnings, a figure of \$0.87 per \$100 of deposits is obtained for 1939. This represents net earnings from current operations. To obtain net profits, we must add to this recoveries and profits on securities and loans, etc., and subtract losses, charge-offs, etc. The former figure for all insured commercial banks in 1939 amounted to \$0.68, while the latter came to \$0.83. The difference between these two—\$0.15—when subtracted from net earnings gives \$0.72 net profits per \$100 of deposits.

Banks operate on a small margin of profit.—It is clear from the preceding example that the commercial banks of the country operate on a very small margin of profit per dollar of loanable funds. The figure for 1938 was even lower, standing at \$0.60 for insured commercial banks. These margins are considerably lower than in the late 'twenties when the banks generally had net profits of something over \$1.00 per \$100 of deposits. This is explained in part by the large amount of unused funds held by the banks of late years. Thus national banks had net profits of \$0.80 per \$100 of deposits in 1939 while their net profits per \$100 of loans and investments were \$1.18. The discrepancy be-

of All Insured Commercial Banks 1939, prepared by the Bank Management Commission of the American Bankers Association.

tween these two ratios is considerably greater than in 1929 for the reason noted.

Return to stockholders higher.—In spite of the extremely small margin of profit on which the banks of the country are operating, the return to stockholders is not unreasonably small for the average successful bank. The equity of the stockholders in the business is represented by capital, surplus and undivided profits, including reserves for dividends, contingencies, retirement of preferred stock, etc., but excluding reserves for taxes, interest and other accrued expenses. On this basis, member banks of the Federal Reserve System earned \$6.33 on each \$100 of total capital accounts in 1939 and \$4.93 in 1938. This was possible because the banks' earning assets (loans and investments) amounted to \$5.97 and \$5.86 per \$1 of capital accounts in the years in question.

Changes in bank administration designed to enhance profits.—It was pointed out above that the banks had managed to bring their profits back to somewhere near pre-depression levels by instituting various economies and trying to find new sources of income. In the days of higher money rates, for example, the typical bank performed many services without charge. Some of these were incidental to carrying on a banking business, but others were far removed therefrom. The following list, taken from a study made by the Commission on Banking Practices and Clearinghouse Functions of the American Bankers Association,³ includes services which were performed without charge by practically all banks :

Armored car

Cashier's checks (at par) for payment of non-customers' local bills

Cashing out-of-town checks for non-customers

Check books (many banks print special check books and make no charge)

Collection of bill of lading drafts

Collection of notes, drafts, and coupons

Converting foreign moneys into U. S. Currency and vice versa

Credit information (often involving an expensive investigation)

Currency shipments

Deposit tickets

³ *Unprofitable Practices and the Remedy*, Commercial Bank Management, Booklet No. 4.

- Drawings against uncollected funds
- Endorsement stamps
- Interest on checking accounts
- Interest on proportion of checking accounts (demand deposits) kept as reserve (without interest) with Federal reserve bank
- Investment advice
- Issuing drafts on other cities
- Making up payrolls
- Novelty savings banks to stimulate savings
- Overdrafts — N. S. F. checks
- Passbooks
- Safe-keeping of securities for individuals
- Safe-keeping of securities for out-of-town banks (which includes clipping of coupons, exchange of bonds, etc.)
- Telegraphic transfer of funds
- "Temporary" safe deposit boxes
- The small checking account
- The small savings account that draws frequently
- Transit items credited at par

In addition to these essential, but generally unprofitable, banking services, the following group of "convenience" services was also listed :

- Collecting subscriptions for charitable purposes
- Collection of school savings
- Collection of fraternal dues
- Delivery of payrolls
- Deposits for new-born babies
- Distribution of bats and balls to boys' clubs
- Distribution of Christmas baskets to needy
- Distribution of seeds
- Employing a veterinarian
- Help on home financing
- Hotel reservations
- Insurance of payrolls
- Letters of congratulation on personal promotions
- Paying customers' household expense bills and charging accounts
- Preparation of individual income tax returns
- Purchase of commutation tickets and charge to customers' accounts
- Research Bureau
- Theater and other amusement reservations
- Ticker tape in lobby
- Travel Bureau
- Weighing scales

The items in this list were obtained as a result of a survey covering about two hundred banks in all parts of the country.

Obviously, the services cited in the first list have to be performed, but it would seem reasonable to charge for some of them and many banks have instituted such charges. The majority of the items in the second list are little short of preposterous and have been abolished by nearly all banks. Since the study referred to estimated that these services cost the banks of the country in the neighborhood of \$300,000,000 annually, charging for the necessary ones and abolition of the others has saved the banks a substantial sum.

Another substantial saving has resulted from the decline in interest paid to depositors and on borrowed money. The latter was zero for member banks in both 1938 and 1939, while the former amounted to \$0.54 to \$0.49 per \$100 of loans and investments in the same two years. These latter amounts compare with a figure of \$2.13 in 1929. The reduction is due to the prohibition of interest on demand deposits contained in the Banking Act of 1933, and a general reduction in the rate of interest paid on time and savings deposits. The Board of Governors of the Federal Reserve System has fixed the maximum rate of interest on such deposits at $2\frac{1}{2}$ per cent, but many banks are paying less. With the large excess reserves held by the banks, the amount of money borrowed is practically nil, so that interest on this item, which was \$0.18 in 1929, has been eliminated.

Exchange, collection and service charges.—Another source of income that has increased considerably consists of exchange, collection and service charges. These amounted to \$0.06 per \$100 of loans and investments in 1929. Ten years later this figure had increased to \$0.38 of which \$0.28 consisted of service charges on deposit accounts. On small accounts, service charges are frequently fixed arbitrarily, the depositor being charged a sum, usually \$0.50, each month that his account falls below a specified minimum or average, such as \$100 or sometimes \$50. A somewhat more logical method is to base the service charge on a combination of size and activity of the account which can be analyzed quickly by the use of a chart such as that appearing in Figure 18. Naturally, the rate at which earnings on an account are computed may have to be changed from time to time with changes in money rates.

One-Minute Chart for Analyzing Bank Accounts

Shows Monthly Profit or Loss Computed at 5 Per Cent on a Thirty-Day Basis

Average Daily Ledger Balance		\$25	\$50	\$100	\$200	\$300	\$400	\$500	\$750	\$1000	\$1250	\$5000	\$10000
Average Daily Loanable Balance		\$18.75	\$37.50	\$75	\$150	\$225	\$300	\$375	\$750	\$1000	\$1250	\$5000	\$10000
Monthly Profit on Loanable Balance		.07	.16	.31	.63	.93	1.25	1.56	3.13	7.81	15.63	31.25	62.50
Number of Items	Cost of Items												
1	.01												
2	.02												
3	.03												
4	.04												
5	.05												
6	.06												
7	.07												
8	.08												
9	.09												
10	.10												
15	.15												
20	.20												
25	.25												
30	.30												
40	.40												
50	.50												
100	1.00												
200	2.00												
300	3.00												
600	6.00												
800	8.00												
1000	10.00												

Average daily float should be subtracted from ledger balance. On most small accounts float need not be taken into consideration. Reproduced by permission of the American Bankers' Association Journal.

A more complicated account analysis, which may be profitably used on larger deposit balances, is illustrated in the accompanying forms. Here, overhead costs are taken into account and the collection time of the items deposited. In the accompanying analysis, Form A shows the analysis of the account day by day throughout the month. Obviously, it was a very active one during the month in question. Three times there were overdrafts for a day and the credits varied widely from day to day throughout the period. Not only was the account active, but a considerable proportion of the deposits was in the form of out-of-town items or items on other banks requiring from one to eight days for collection. Since no exchange charges were either paid or received by the bank, there was a loss of interest on these deposits during the collection period. The method of obtaining the average amount of items in transit per day is shown at the foot of the form—in section (c). To the sum of the 1-day items is added twice the sum of the 2-day items, four times the sum of the 4-day items, and eight times the sum of the 8-day items. The total is then divided by the number of days in the month to obtain the desired figure. The average daily balance is obtained by dividing the total credits less overdrafts by the number of days in the month.

Form B shows the method by which the information tabulated in Form A is used to determine whether or not the account is profitable. From the average daily balance of \$2750 the average daily amount of items in process of collection is subtracted, leaving a net cash daily balance of \$1000. After setting aside the non-earning reserve held against this deposit, the amount remaining—on which income may be earned—is reduced to \$900. The gross profit or loss on the account is next obtained by subtracting the total interest expense (interest paid to depositor on his average balance) from the total interest received from the utilization of the available portion of the depositor's balance. In this particular example, the account exhibited a gross loss of \$0.74.

The net profit or loss is obtained by subtracting the overhead cost from the gross profit (or adding it to the gross loss). It will not be necessary here to go into the methods used in allocating this expense among the various divisions of

MONEY AND BANKING

Form A

ANALYSIS OF ACCOUNT

JOHN DOE			June, 1920					
Name of Depositor			Period of Analysis					
Date	Daily Balances		Amounts in Transit				Exchange	
	Dr.	Cr.	1 Day	2 Days	4 Days	8 Days	Paid	Received
1		\$1,900			\$500.			
2		2,000.	\$1,200.					
3		3,010.	1,800.		500.			
4		3,765.		\$1,900.		\$100.		
5		3,765.						
6		1,800.	500.			50.		
7	\$300.				80.			
8		1,000.			270.			
9		4,900.	1,000.					
10		2,200.				500.		
11		3,000.		2,000.	400.			
12		3,000.						
13		4,500.	1,500.		150.			
14	200.					270.		
15		2,700.			510.			
16		3,500.	2,000.					
17		3,900.	1,000.		70.			
18		4,200.		3,000.		180.		
19		4,200.						
20		2,100.			200.			
21		5,700.	1,500.			400.		
22		4,500			300.			
23	500.							
24		4,360.	1,000		120.			
25		2,300.		1,000.	200.			
26		2,300.						
27		2,800.						
28		1,500.						
29		2,400.						
30		2,200.						
31								
Totals	\$1,000.*	\$83,500.	\$11,500.	\$7,900.	\$3,300.	\$1,500.		

(a) One Day's interest on overdraft say 17c.

(b) Average \$2,750 per day in a 30-day month.

\$11,500 for 1 day \$11,500
 7,900 for 2 days 15,800
 3,300 for 4 days 13,200
 1,500 for 8 days 12,000
 Divide by 30) \$52,500

(*) Supposedly unavoidable debits used for illustration in analysis.

(c) Average per day \$ 1,750

Reproduced by permission of the Federal Reserve Bank of New York.

Form B

SUMMARY OF ANALYSIS

JOHN DOE

Name of Depositor

June, 1920

Period of Analysis

INCOME Earning Balance

1. Average daily balance ((b) — Form A).....	\$2,750
2. LESS: Average in transit ((c) — Form A).....	1,750
3. NET CASH daily balance.....	\$1,000
4. LESS:	
In Vault.....(2.9%)	29.
Reserve with Federal Reserve Bank.....(7.1%)	71.
.....(0%)	0
.....	100
INCOME EARNING REMAINDER.....	(90%) \$900

GROSS Profit or Loss

Income earning remainder employed as follows:

	Expense	Income
5. With other banks. ....( 3%) at 2¼%		.05
6. Loaned and invested .....(87%) at 5+%		3.62
7. INTEREST:		
Received on overdrafts ((a) — Form A) ..\$1,000 at 6%		.17
Paid on average balance ((b) — Form A) ..\$2,750 at 2%	4.58	
MISCELLANEOUS:		
	4.58	3.84
PROFIT		
GROSS LOSS ✓ .....		.74
	4.58	4.58

NET Profit or Loss

✓

Gross profit or loss brought down.....

OVERHEAD COST:

8. Charge for ACTIVITY..... 163 items at .0233 each	3.80	
9. Charge for SIZE—cash balance \$1,000 at 2.05 per annum	.17	
10. Charge for NUMBER..... at 4.08 per annum	.34	
	5.05	
PROFIT		5.05
NET LOSS ✓		
	5.05	5.05

the bank's business. In respect to the present illustration it may merely be noted that out of a total expense of \$35,500 the amount of \$15,696 was allocated to depositors' checking accounts, and that of this amount \$8891 was allocated to activity expense, \$2053 to size expense, and \$4752 to number expense. On this basis, the overhead costs applicable to the account under analysis amounted to \$4.31 which, when added to the gross loss of \$0.74, resulted in a net loss on the account for the month of \$5.05.

Value of analysis to the bank.—The value of such an analysis is obvious. Without it the banker would be inclined to look on an account as large as the one used in the illustration as a distinct source of profit to the bank. Actually, it is likely to be costing the bank money if it is very active and if the deposits contain a large number of out-of-town items which are not immediately available. In the example here used, even the elimination of the interest paid to the depositor would not avert a loss. Moreover, it is clear from the summary of the analysis contained in Form B that it is the large float (amounts in transit) which makes this account so expensive to carry. If the bank could earn income at the average rate on the \$1750 average items in transit, it could continue to pay interest to the depositor and still show a substantial profit on the account. The course of action indicated is therefore the institution of an interest or exchange charge on out-of-town items to cover the loss of interest suffered by the bank during the collection period.

It should be noted, however, that one month's analysis is not a sufficient basis for condemning an account as unprofitable. In certain months a depositor may have a great many payments to make, while at other times of the year his account may be relatively inactive and quite profitable. It is therefore necessary to carry the analysis over a sufficiently long period before passing judgment on the expense or profitability of a given account.

In the foregoing analysis, the month used was June 1920. At present several changes would have to be made in such an analysis. Banks are no longer permitted to pay interest on demand deposits. As pointed out above, however, the account would show a loss, even with the interest item elimi-

nated. Moreover, under present conditions the income would be considerably less. Demand balances with other banks bring in no income and reserves held are much larger than in the example given. Finally, the amount received from loans and investments is much less than 5 per cent. If these adjustments were made to fit current conditions, the account would still be decidedly unprofitable.

Distribution of bank profits.—We have been concerned, up to this point, with average earnings and expenses of banks located in all sections of the country. If the earnings figures for different sections are examined, a rather wide diversity appears. Table XIV shows net profits per \$100 of loans and investments of member banks by Federal Reserve Dis-

TABLE XIV

NET PROFITS OF MEMBER BANKS (PER \$100 OF EARNING ASSETS)

<i>District</i>	1938	1939
Boston	1.00	1.08
New York ..	0.60	0.83
Philadelphia ..	0.43	0.91
Cleveland	0.85	1.19
Richmond ..	1.15	1.14
Atlanta ..	1.31	1.44
Chicago	1.11	1.28
St. Louis ..	0.85	1.16
Minneapolis ..	0.84	1.09
Kansas City ..	1.62	1.56
Dallas ..	1.55	1.68
San Francisco ..	0.79	1.00

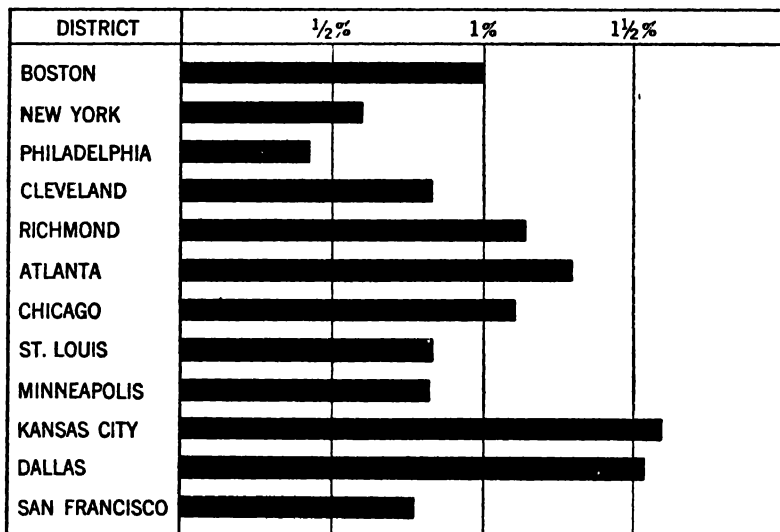
Source : *Federal Reserve Bulletin*, May 1940 ; p. 464.

tricts for the years 1938 and 1939. The discrepancies are particularly marked for 1938 as indicated in the table and in Chart XIII. In that year the member banks of the New York, Philadelphia, Cleveland, St. Louis, Minneapolis and San Francisco districts suffered from unusually small profits, the profits of banks in the Kansas City and Dallas districts were unusually large, and those of banks in the remaining districts were about normal. How is this uneven distribution of bank profits to be accounted for? Was it a result of

particularly heavy losses in some sections, or were the banks in the districts showing small profits merely less efficiently operated than those of other districts?

CHART XIII

MEMBER BANK PROFITS AS A PERCENTAGE OF EARNING ASSETS.
By FEDERAL RESERVE DISTRICTS — 1938



Source : *Federal Reserve Bulletin*, May 1940.

In attempting to answer these questions, attention is directed to Table XV, which shows net earnings, net losses and depreciation, and net profits for 1938 by Federal Reserve districts.

Examination of this table indicates that net losses and depreciation was the factor responsible for the most significant discrepancies in net profits. Thus the net current earnings in the Philadelphia district were higher than in any of the other districts except Kansas City and Dallas, yet net profits were far below those of any other district as a result of extremely large losses. Kansas City, on the other hand, showed a small net gain which gave her banks the largest net profit of any district. The banks of the other districts

TABLE XV

MEMBER BANK EARNINGS 1938 (PER \$100 OF EARNING ASSETS)

<i>District</i>	Net current earnings	Net losses and depreciation on securities, etc.	Net profits
Boston	1.29	0.29	1.00
New York	1.03	0.43	0.60
Philadelphia	1.53	1.10	0.43
Cleveland	1.25	0.40	0.85
Richmond	1.39	0.24	1.15
Atlanta	1.52	0.21	1.31
Chicago	1.12	0.01	1.11
St. Louis	1.19	0.34	0.85
Minneapolis	1.15	0.31	0.84
Kansas City	1.61	0.01 *	1.62
Dallas	1.75	0.20	1.55
San Francisco	1.28	0.49	0.79

* Net gain.

Source : *Federal Reserve Bulletin*, May 1940; p. 464.

showing small profits also had substantial net losses, although not nearly as large as in the Philadelphia district.

In the districts showing net profits of less than \$1.00 per \$100 of loans and investments the proportion of losses on loans to losses on investments varied considerably as shown in Table XVI. In the San Francisco district, losses on loans

TABLE XVI

GROSS LOSSES ON LOANS AND INVESTMENTS—1938

<i>District</i>	Gross losses on loans per \$100 of loans	Gross losses on investments per \$100 of investments
New York	\$.92	\$1.00
Philadelphia	1.32	1.34
Cleveland . . . . .	.60	.86
St. Louis . . . . .	.51	1.19
Minneapolis . . . . .	.69	1.04
San Francisco	1.02	.55

Source : *Federal Reserve Bulletin*, May 1940.

were much higher than on investments. In the Philadelphia district, the two were nearly even, while in the remaining districts losses on investments exceeded losses on loans by more or less substantial amounts.

Profits reduced heavily by losses.—The evidence which has been presented is indicative of the fact that losses on bad debts or on investments are a significant factor in reducing bank profits. Those banks which are able to keep these losses down to a minimum are practically certain to add consistently to their profits even when their regular operating expenses are relatively heavy. The methods by which losses can be reduced have been described in earlier chapters. By maintaining an efficient credit department and by careful analysis of the investments purchased it is usually possible to prevent losses from assuming dangerous proportions. In connection with long-term investments, however, the bank is frequently subjected to losses because of adverse price movements in the securities market over which it can exercise no control. Even such losses may be averted to some extent by investing so far as possible in short-term paper which is not subject to marked price fluctuations.

Conclusion.—While the problem of earning satisfactory profits is still acute with many banks, the banks as a whole have met the problem exceptionally well by reducing expenses and acquiring added income from service and collection charges. With large excess reserves and a probable substantial increase in the demand for loans as a result of the defense program, the outlook for bank profits is brighter than it has been for some years.

PART III

**FEDERAL RESERVE POLICY AND
PRACTICE**

CHAPTER XXI

THE MONEY MARKET IN THE UNITED STATES

Introduction. — The term “money market” may be used in a broad sense to include the entire market for short-term bank loans and investments, including loans to customers by the banks. More commonly, however, reference is to the open markets only. These include, in the United States, the markets for bankers’ acceptances, commercial paper, call loans to brokers, Treasury obligations, and high grade bonds. Actually, of course, bonds are dealt in on the investment or capital market rather than the market for short-term money, but the fact that marketable issues are frequently bought and sold by the banks makes their inclusion in a discussion of the money market desirable.

The purpose of this chapter is to describe the organization and operation of the various open markets in the United States and to give some indication of the volume of funds employed in the principal short-term markets. It will be observed that the open markets mentioned are the ones in which the banks commonly secure their secondary reserve investments. It will accordingly be well to recall from time to time in the course of the following discussion the principles governing the selection of secondary reserves as set forth in Chapter XIII.

BANKERS’ ACCEPTANCES

Origin and use. — The type of credit instrument now known in the United States as the banker’s acceptance had no significant development until after the passage of the Federal Reserve Act. Prior to this, national banks had not the power to accept drafts drawn against them, and the number of state banks that accepted drafts was negligible. The Federal Reserve Act, as we have seen (Chapter IX), gave the na-

tional banks power to accept bills or drafts arising out of import or export transactions up to 50 per cent of their capital and surplus, while later amendments broadened this power to include drafts arising out of certain domestic transactions and increased the limit for an individual bank, by permission of the Federal Reserve Board, to 100 per cent of its capital and surplus, provided that not more than 50 per cent of the acceptances were domestic bills.

As the law now stands, member banks may accept, (1) drafts arising out of the domestic shipment of goods or the domestic storage of readily marketable staples, (2) drafts arising out of the exportation or importation of goods and the storage or shipment of goods in or between foreign countries, and (3) drafts drawn for the purpose of creating dollar exchange. All drafts coming under the first two heads must be secured either by shipping documents or by warehouse receipts. The third class which is not yet very significant is composed of "clean bills or drafts" which are not directly secured by goods in storage or under shipment.

The acceptance market.—If bankers' acceptances are to perform their proper function in the banking system, it is essential that they be dealt in actively in a wide market. The existence of such a market implies, first, the existence of the acceptances themselves in the hands of a group of sellers who wish to dispose of them, and, second, a group of buyers who can be depended upon to buy at a price all of the acceptances that are offered for sale. It will also be necessary, as in other highly organized markets, to have a group of dealers—or brokers—to act as intermediaries between the buyers and the sellers.

The existence of a broad, active market in acceptances adds to the liquidity of this form of paper. Since the acceptance itself is used in financing the shipment and/or storage of marketable goods, it is self-liquidating paper and will turn into cash at maturity—market or no market. But if an active market exists, the natural liquidity of the acceptance is increased by its marketability. Acceptances are bought and sold on a discount basis, so that they can be easily transferred from one party to another before maturity, provided that there are always buyers ready to purchase any paper offered.

The development of the American acceptance market.— Although bankers' acceptances were used to a considerable extent during the War, we shall be concerned here with the development of the market in the post-war period. Following the depression in 1921, the market for bank acceptances in the United States developed rapidly until 1929. Since the latter year, however, the volume of paper outstanding in the market has declined in marked fashion. This is

TABLE XVII: BANKER'S ACCEPTANCES OUTSTANDING (\$'000,000 OMITTED)

<i>End of Decem-ber</i>	<i>Total</i>	<i>Imports</i>	<i>Exports</i>	<i>Domes-tic</i>	<i>Ware-house Credits</i>	<i>Dollar Ex-change</i>	<i>Goods stored in or shipped between foreign countries</i>
1924	821	292	305	38	162	23	.
1925	774	311	297	26	103	19	17
1926	755	284	261	29	116	26	40
1927	1,081	313	391	21	197	28	131
1928	1,284	316	497	16	174	39	243
1929	1,732	383	524	23	285	76	441
1930	1,556	221	415	35	271	52	561
1931	974	159	222	16	251	31	296
1932	710	79	164	14	215	10	228
1933	764	94	207	14	263	4	182
1934	543	89	140	8	186	2	119
1935	397	107	94	11	99	2	84
1936	373	126	86	83		2	76
1937	343	117	87	78		2	59
1938	270	95	60	57		3	56
1939	233	103	39	54		16	22
1940	209	109	18	44		10	27

Sources: Annual Reports of the Federal Reserve Board, *Federal Reserve Bulletin*.

shown in Table XVII which gives the amount of acceptances outstanding by classes at the end of each year from 1924 to 1940.

An examination of the figures here presented discloses certain interesting trends. It shows that bankers' acceptances have not had any wide use in financing the domestic shipment of goods, whereas the volume of acceptances based on goods in warehouse was substantial up to the end of 1933 and decreased sharply thereafter to the close of 1940. The decrease in the volume of warehouse credits after 1933 is

probably to be accounted for by the A. A. A. program and two droughts which sharply reduced staple crop surpluses.

The establishment of various government credit agencies to extend credit to farmers at very favorable rates is also a factor in this reduction. Acceptances based on goods stored in or shipped between foreign countries showed a rapid increase up to the end of 1930 when they attained the largest volume of any class of bills. Since that time they have become much less significant. A large share of this class of acceptances was based on goods stored in European countries—chiefly Germany—and the difficulties of 1931 brought a sharp decline in this type of bill. In any event, acceptances based on goods stored in foreign countries are of doubtful liquidity within the maturity of the acceptance, so that the large increase in this class of bills up to 1930 was not particularly desirable.

Taking the period shown in the table as a whole, acceptances based on the exportation and importation of goods have constituted the most important classes of bills and probably the best bills, being really self-liquidating in nature. In spite of the revival of business in the United States since 1934, these classes of acceptances have remained low in volume. This is in part attributable to the fact that the banks, having large excess reserves, have financed exporters and importers with direct loans instead of resorting to acceptance credits. Moreover, many of our exports in 1940 went to England and her allies and were paid for directly with dollar credits, no extension of credit being requested. Thus acceptances based on exports had well nigh vanished by the end of 1940.

The organization of the American acceptance market. —

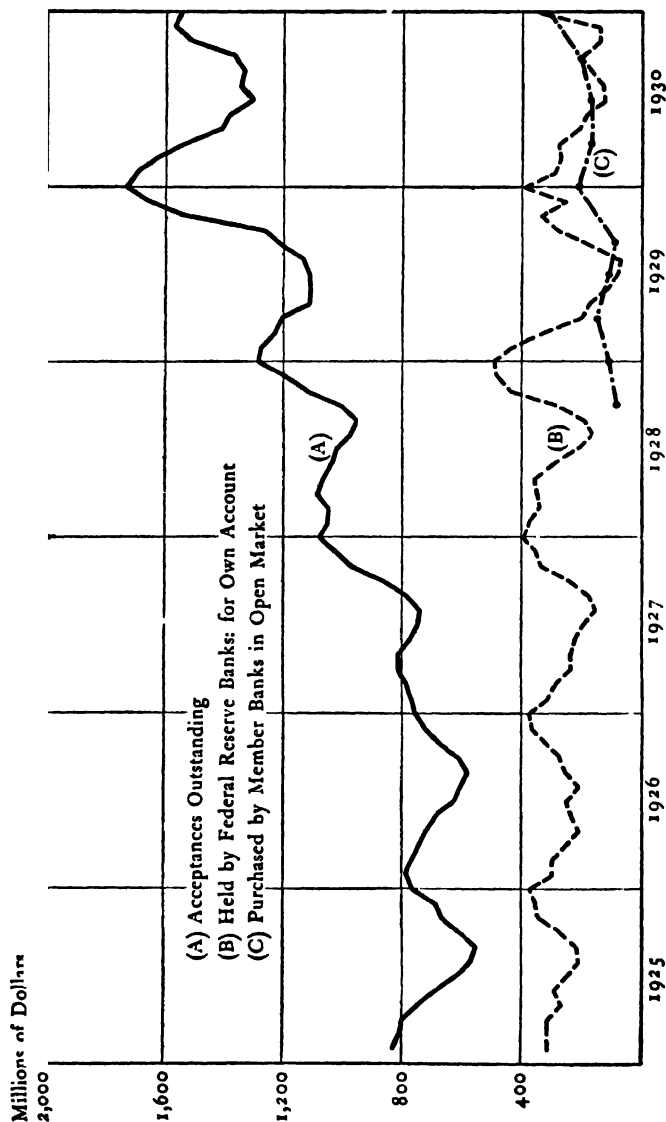
It was pointed out in an earlier paragraph that a satisfactory discount market requires the existence of a group of sellers with acceptances to dispose of, a group of buyers which is always ready to absorb the supply of acceptances at some rate of discount, and dealers to act as intermediaries. The American market has these essential constituents. The parties for whom the banks have accepted bills—or their banks acting as agents—are constantly coming into the possession of acceptances which they wish to dispose of. There has also

developed a group of acceptance dealers who will buy acceptances from banks or others who have them for sale. The acceptances bear no designated rate of interest, but are discounted by the dealers at the prevailing market rate. The dealers then dispose of the bills they have purchased at a lower rate, if possible, than that at which they have bought them, the dealers' profit being the difference between the buying and selling rates.

The Reserve banks and the acceptance market.—The majority of acceptances are sold by the dealers to banks, although corporations, clubs, and other parties seeking a highly liquid, short-time investment occasionally purchase this type of paper. If the discount market is to function properly, there must also be some institution which will purchase any acceptances that cannot be marketed elsewhere, in order that a situation will never arise in which the dealers are unable to dispose of their holdings. In the United States the Federal Reserve banks have adopted this policy of standing ready always to buy eligible bankers' acceptances at their quoted buying rates. They have thus supported the market by taking up any excess of acceptances which could not be disposed of elsewhere.

The policy of supporting the acceptance market is in line with the policy followed by the Bank of England, which stands ready to discount high-grade acceptances for the English dealers at any time. The Bank of England, however, maintains its buying (discount) rate on such paper above the market rate, so that the dealers can discount bills with the Bank only at a loss. The Reserve banks, on the other hand, up to the time of the depression, most of the time kept their buying rates on acceptances below their regular discount rates to such an extent that the former tended to fix the rate in the acceptance market. The result was doubtless to stimulate the rapid development of the market for acceptances, but it also resulted at times in the holding by the Reserve banks of an unduly large proportion of the total acceptances outstanding. This is shown on Chart XIV which traces the course of total acceptances outstanding, the amount held by the Reserve banks for their own account and—for two years—the amount purchased by member banks in the open

CHART XIV
DISTRIBUTION OF DOLLAR ACCEPTANCES AND TOTAL OUTSTANDING



Source : Annual Report of the Federal Reserve Board 1930.

market from 1925 to 1930 inclusive. After 1930 the situation changed. The heavy demand of the banks for liquid investments drove the market rate on acceptances below the buying rate at the Reserve banks with the result that the great bulk of the acceptances outstanding were held by member

banks with the exception of a few months following England's departure from the gold standard when the Reserve banks bought heavily in the open market. Following the banking crisis in 1933, the Reserve banks' holdings of acceptances dwindled until, in the spring of 1937, they amounted to less than 1 per cent of the total outstanding, and had disappeared entirely from the Reserve banks' portfolios before the end of 1940. Thus for some years the acceptance market has stood on its own feet without undue assistance from the Reserve banks. The explanation of this lies in the easy money conditions which have prevailed. It is to be hoped that, with a return eventually to more normal conditions, the Reserve banks will continue to allow the acceptance market to stand on its own feet by keeping their buying rates above the market as does the Bank of England. Under such circumstances, acceptances would be sold to the Reserve banks only in times of stress, as in 1931 and 1933, while in ordinary times practically the entire volume of outstanding bills would be held by the banks or other investors.

COMMERCIAL PAPER

Origin and nature.—In a broad sense, commercial paper includes any sort of self-liquidating paper arising out of commercial or industrial transactions. It would thus include the notes and/or acceptances discounted by a bank for its own customers as well as bankers' acceptances which have been discussed in the preceding section of the chapter. As the term is used in the present connection, however, it refers to the promissory notes of borrowers which are sold in the open market. That is, the borrower, instead of applying to his bank for a loan, sells his note to a dealer known as a commercial paper dealer or house, the dealer in turn disposing of the paper to banks having surplus funds to invest. The bulk of the paper handled by the commercial paper houses consists of the single-name promissory notes of the borrowers, although double-name trade and non-trade paper, i.e., promissory notes held by the borrower and endorsed by

him, is handled to some extent. More recently, acceptances have also entered into the portfolios of the commercial paper houses in relatively small amounts.

The open market for commercial paper in this country dates back to twenty-five years or more before the Civil War.¹ The dealers in these early times were brokers, operating on a straight commission basis, Mr. Clews' banking and brokerage house being the only exception. Clews initiated the practice of buying the paper outright and selling it at a profit, if possible, in addition to the commission charged. This practice became increasingly popular as time went on, and at present practically all of the commercial paper dealers buy their paper outright, although still charging a commission as would a strictly brokerage house.

Organization of the market.—The market for commercial paper, like that for bankers' acceptances, is composed of a group of sellers, a group of middlemen or dealers, and a group of buyers. The sellers of commercial paper are business concerns of high credit standing who are in need of working capital funds to finance the production or distribution of their products. In the typical instance, they sell their promissory notes to the commercial paper dealers or houses, who buy the paper outright at the market rate of discount less a commission of $\frac{1}{4}$ of 1 per cent. The dealer then offers this paper to banks having surplus funds to invest. If he can sell it at a lower rate of discount than that at which it was purchased, he makes a profit in addition to his commission. If he has to dispose of it at a higher rate than that at which he bought, however, he will lose on the transaction accordingly.

The business of the commercial paper house is thus to buy and sell paper, not to hold it as an investment. If for any reason it is impossible to sell the paper promptly, the dealer will obtain a loan from a commercial bank—putting up the paper as security—to carry the paper until it can be disposed of. When the paper is offered for sale to a bank, the prospective purchaser is allowed a ten-day option to permit an investigation of the credit standing of the maker or makers of the paper in question, which may be returned at the end

¹ Phillips, C. A., *Bank Credit*, p. 131.

of the ten days if the investigation proves it to be unsatisfactory. The necessity for some sort of option arises out of the fact that the commercial paper houses, while guaranteeing the genuineness of the signatures on the paper sold, do not themselves endorse it and so are not liable in the event of the failure of a given maker to pay his note at maturity. Thus, although the commercial paper dealers themselves make a thorough investigation of the borrowers' credit position before buying the paper, it is only fair to the purchasing banks to allow them to make independent analyses of the quality of the paper in which they wish to invest.

In order to make open market commercial paper more marketable, the notes are frequently made in denominations of \$2500 and \$5000, so that they may be sold to the smaller banks having limited amounts to invest, while even the larger banks often prefer to purchase the notes of a variety of makers rather than to invest a large sum in the paper of a single name. Notes of very large denominations are accordingly not usual although they appear occasionally in the market. The notes ordinarily run from thirty days to six or eight months and are ordinarily made payable to the order of the maker and endorsed in blank, which permits them to be transferred from hand to hand without further endorsement.

Once a bank has decided to purchase a note or notes from a commercial paper house, it is customary for the bank to hold the paper until maturity. In fact, there is no quick market for such paper prior to maturity as in the case of bankers' acceptances. The Federal Reserve banks are not permitted to deal in this class of paper in the open market and cannot, therefore, support the market for commercial paper as they do for bankers' acceptances. Open market commercial paper may be rediscounted at the Reserve banks, however, when within ninety days of maturity, so that it is possible to turn it into reserve funds before maturity if necessary through the rediscount process.

Advantages and drawbacks.—To the banks the existence of the open market for commercial paper is advantageous in a number of respects. In the first place, it provides one method by which the bank may obtain diversification of its

business. The makers of open market paper comprise business houses in various lines of trade and industry located in various sections of the country, so that the dealers have a well-rounded and highly diversified list of names in their portfolios. This makes investment in commercial paper especially desirable for banks in one-industry communities where local loans are tied up with a single industry.

A second advantage of the commercial paper market is that it offers a source of investment for the surplus funds of the banks in seasons when the local demand for loans is at a low point. The commercial paper houses offer a wide variety of maturities, so that a bank may buy paper maturing at the time when funds will be needed locally to meet the next seasonal demand for loans at home.

Two other advantages may also be mentioned. Paper purchased in the open market is paid at maturity. No renewals are expected or asked for, while the bank frequently finds it necessary to renew the maturing paper of its own customers. Furthermore, open market paper constitutes a safe investment, the losses on such paper in the past having been very small indeed.

While the commercial paper market is thus seen to be beneficial to the banks in a variety of ways, it presents other aspects which are less advantageous. Some banks are bound to lose business because certain customers borrow through the commercial paper houses instead of coming to their own banks for loans. In times of stress, however, the commercial paper dealers are likely sharply to curtail their purchases, and these same customers will be forced to fall back on their banks for accommodation at a time when the latter will find it difficult to care for their needs.

When a bank loses a customer to the open market, the funds thereby released to the bank may themselves be invested in open market paper, but the bank obtains open market notes only at a smaller discount as a rule than would be charged to its own customers and loses somewhat in consequence. Many times, however, the legal restriction on loans to one borrower prevents a large borrower from obtaining more than a fraction of the funds he needs to borrow from his local bank, and he resorts to the open market for

accommodation on this account. In such circumstances, the bank cannot be said to lose, since in any event it could not have cared for the customer's credit needs.

We need not concern ourselves with the advantages and disadvantages of open market borrowing to the borrower. It may be taken for granted that the lower rate of discount obtained plus the enhancement of his credit standing which results from selling his notes to commercial paper houses are more than sufficient to offset any drawbacks incidental to such borrowing.

On the whole, the advantages of the commercial paper market, both to the banks and to the borrowers, far outweigh any attendant drawbacks. In fact, in a unit banking system such as that of the United States, some such arrangement is well-nigh essential to provide banks in single-industry areas with the opportunity to diversify their business through investment in this safe form of self-liquidating paper.

The volume of commercial paper outstanding varies with changes in business and financial conditions as is indicated in Table XVIII. The sharp decrease in the amount of com-

TABLE XVIII
COMMERCIAL PAPER OUTSTANDING
(\$1000,000 OMITTED)

<i>Year</i>	<i>Jan.</i>	<i>Apr.</i>	<i>July</i>	<i>Oct.</i>
1922	705	792	805	775
1923	807	867	854	815
1924	818	871	879	925
1925	820	801	727	684
1926	654	663	655	593
1927	551	599	569	611
1928	577	571	483	427
1929	407	351	265	285
1930	304	553	528	485
1931	327	307	289	210
1932	108	108	100	113
1933	85	64	97	130
1934	108	139	168	188
1935	171	173	164	180
1936	178	174	188	199
1937	244	285	325	323
1938	299	271	211	213
1939	195	192	194	205
1940	219	239	232	252

Source: Annual Reports of the Federal Reserve Board; *Federal Reserve Bulletin*

mercial paper outstanding which occurred in 1928 and 1929 may be attributed to the bull stock market which enabled business concerns to finance their needs more cheaply through the issue of stock than through borrowing at the bank or on the open market. With the termination of the bull market, commercial paper outstanding rapidly recovered approximately to the levels of 1926 and 1927. As the depression deepened, however, the volume of commercial paper fell off rapidly, reaching a low of \$60 million in May 1933. Recovery from the low point was slow, reaching only \$323 million in October 1937, declining again to \$205 million in 1939 and standing at \$252 million in October 1940.

CALL LOANS TO BROKERS

Nature and use.—A third type of open market investment, and one which has always bulked large in importance in this country, consists of call loans to brokers on the stock exchange. Such loans come into existence when brokers borrow at the banks in behalf of their customers who wish to buy stocks or bonds on a margin. To illustrate, a speculator will put up cash with his broker to, say, 25 per cent of the price of the stock he wishes to buy. The remaining 75 per cent is then borrowed by the broker from the bank, the entire amount of stock purchased being put up as security for the loan. If the purchase price of the stock amounts to \$10,000, the bank then holds \$10,000 of security against a loan of \$7500. If the price of the stock goes down, so that its market value is worth less than \$10,000, the bank may demand added security sufficient to keep its 25 per cent margin intact. In the event that the added security is not forthcoming, the bank reserves the right to sell the collateral and recover the amount of its loan. In case the stock advances in price, there is of course no need for such action on the part of the bank.

The loans to brokers of the type here considered are made on call. That is, the loan may be terminated at the pleasure of either the bank or the borrower. Presumably, the banks will call loans of this character when they need funds for other purposes, while the broker will call a loan when his customer sells the stock he has purchased (whether

at a profit or a loss) and withdraws from the market. At times, also, the speculator or the investor may obtain a time loan from his bank in order to carry his securities, in which case he may close out his call loans.

Desirability as a source of investment. — From the point of view of the banks, call loans appear to furnish an excellent source of investment for temporary surplus funds. With maturities at the option of the bank and with readily salable stocks or bonds as security, they seem to furnish all that could be asked in the way of liquidity and safety.

But are call loans as satisfactory as they appear to be in these respects? We have seen in an earlier connection that, in the period prior to the establishment of the Federal Reserve System, while call loans served satisfactorily in normal times, they became thoroughly frozen in times of emergency when all of the New York banks were attempting to call loans simultaneously. At present, under the Federal Reserve System, the danger of such occurrences is much more remote. At the time of the stock market break in 1929, loans were called in tremendous amounts by interior banks and others without a money panic. This was made possible by the shifting of loans from the accounts of interior banks and others to the New York banks, whose loans to brokers increased by over \$1,000,000,000 in the week ending October 30—a week in which total brokers' loans decreased by a similar amount. The New York banks were aided in this action "by the New York Reserve bank, which loaned freely to member banks and also purchased \$150,000,000 of United States securities in the open market."² It was thus largely the assistance of the New York Reserve bank which enabled the member banks of that city to meet the situation in such a satisfactory fashion.

It is apparent, then, that call loans as a class were not highly liquid in 1929, but that the existence of surplus lending power elsewhere in the banking system permitted the shifting of these loans from the lenders who wished to withdraw funds from the market to the New York City banks. Since the Reserve banks may be counted upon, presumably, to render aid in times of emergency, we must conclude that at

² *Annual Report of the Federal Reserve Board* 1929, p. 10.

present call loans are liquid for the individual banks of the system. Their safety also was demonstrated by the absence of losses following the 1929 stock market break.

Time loans to brokers.—In addition to call loans, short-term time loans secured by stocks and bonds are made to brokers on the open market in considerable amounts and must be considered as a possible source of investment for tempo-

TABLE XIX

BROKERS' LOANS MADE BY REPORTING MEMBER BANKS IN NEW YORK CITY
(\$'000,000 OMITTED)

		<i>Demand and Time Loans</i>			<i>Demand Loans</i>	<i>Time Loans</i>	<i>Total</i>
		<i>For Own Account</i>	<i>For Out of Town Banks</i>	<i>For Others</i>			
1924	Apr.	680	734	(Not given)	1,037	377	1,414
	Oct.	963	722		1,188	497	1,685
1925	Apr.	998	1,073	(Not given)	1,392	679	2,071
	Oct.	1,006	1,544		1,769	781	2,550
1926	Apr.	905	1,035	528	1,645	822	2,467
	Oct.	866	1,106	726	1,975	723	2,698
1927	Apr.	929	1,131	806	2,190	677	2,866
	Oct.	1,103	1,326	962	2,603	789	3,392
1928	Apr.	1,193	1,616	1,252	3,122	940	4,062
	Oct.	933	1,720	2,048	4,075	625	4,701
1929	Apr.	934	1,649	2,893	5,064	413	5,477
	Oct.	1,257	1,639	3,602	6,082	416	6,498
1930	Apr.	1,557	1,183	1,376	3,585	530	4,115
	Oct.	1,675	537	557	2,165	604	2,769
1931	Apr.	1,322	271	231	1,463	361	1,824
	Oct.	674	90	157	637	284	921
1932	Apr.	423	70	7	401	99	500
	Oct.	389	16	6	262	149	411
1933	Apr.	374	21	4	258	141	399
	Oct.	663	111	5	508	271	779
1934	Apr.	813	156	6	713	262	975
	Oct.	612	133	1	474	272	746
1935	Apr.	714	86	2	566	237	803
	Oct.	836	12		368	480	848
1936	Apr.	1,034					
	Oct.	984					
1937	Apr.	1,085					
	Oct.	915					
1938	Apr.	489					
	Oct.	528					
1939	Apr.	555					
	Oct.	430					
1940	Apr.	482					
	Oct.	301					

Source: Annual Reports of the Federal Reserve Board; *Federal Reserve Bulletin*.

rary surplus funds. Since these loans run for a designated period—usually ninety days—they are considered less liquid than call loans, but otherwise have similar characteristics.

Significance of loans to brokers.—The importance of brokers' loans is shown in Table XIX which gives the amounts of such loans outstanding for certain months of each year from 1924 through 1940.

Examination of the data in this table discloses the fact that loans to brokers bulk large in importance as a source of investment of temporary surplus funds. The volume of funds invested in this market, however, varies a good deal from time to time, depending chiefly upon the degree of speculative activity in the stock market. Thus in 1928 and 1929, an unduly large amount of funds was directed into this market while, by 1932, the volume of brokers' loans was unusually small. Although a bull market of substantial proportions developed in 1935 and 1936, the volume of brokers' loans remained moderate in opposition to normal expectations. The reason for this was that the huge government expenditures had placed sufficient funds in the hands of speculators to enable them to operate on a cash basis to a large extent rather than depending upon borrowed funds. Since 1936-1937 the stock market has been quiet and loans to brokers have declined to a low figure as shown in the table.

TREASURY BILLS AND CERTIFICATES

Significance in the money market.—Another important market for short-term paper is the market for Treasury bills and certificates of indebtedness. Interest-bearing certificates of indebtedness were used widely during the War, being issued by the Treasury in anticipation of receipts from taxes or from the sale of bond issues. They continued to be used after the War in connection with government financing, and in the years just prior to the depression the volume of such certificates of less than six months' maturity averaged about \$750,000,000. In 1929, Congress authorized the Treasury to issue bills, similar to the British Treasury bill, bearing no specified rate of interest, but to be discounted in the market in the same fashion as commercial bills or acceptances. Since

that time, accordingly, both certificates and bills have been issued by the Treasury and sold in the money market.

The volume of certificates and bills outstanding on certain dates since 1931 is indicated in Table XX. It is to be noted that, for the period shown in the table, the volume of funds invested in short-term government obligations is much larger than the total for the other short-term markets. In 1928 and 1929, on the other hand, the volume of brokers' loans far exceeded the volume of outstandings in the other

TABLE XX
TREASURY NOTES, BILLS AND CERTIFICATES
(\$'000,000 OMITTED)

<i>End of June</i>	<i>Notes</i>	<i>Certificates</i>	<i>Bills</i>	<i>Total</i>
1932	1,261	2,726	616	4,603
1933	4,548	2,108	954	7,610
1934	6,653	1,517	1,404	9,574
1935	10,023	.. .	2,053	12,076
1936	11,381	..	2,354	13,635
1937	10,617	..	2,303	12,920
1938	9,147	..	1,154	10,301
1939	7,243	..	1,308	8,551
1940	6,383	..	1,302	7,685

Source: *Federal Reserve Bulletin*.

short-term markets with bankers' acceptances running a poor second. It is also clear from the table that Treasury bills are now used to the exclusion of certificates of indebtedness for the short-term financing of the government.

Treasury bills are issued with maturities of less than a year and, of course, constitute excellent secondary reserve investments because of their safety, ready marketability, and short maturities. So long as such obligations are issued only in anticipation of assured revenues they are unexceptionable. Since the depression began, however, such issues have been used by the government to finance deficits. Under these circumstances, they have little real liquidity, although they can be readily disposed of by the individual bank by sale on the market or to the Federal Reserve banks.

Treasury notes. — In addition to bills and certificates, the Treasury obtains a large amount of funds from the sale of notes which are issued with maturities not in excess of five

years. Treasury notes thus are securities of fairly short maturity and are widely invested in by the banks. Of the \$6,383,000,000 of Treasury notes outstanding on June 29, 1940, \$737,000,000 had maturities falling within the current year, while another \$1,385,000,000 had maturities falling in 1941. The banks would consider such notes practically in the light of bills for purposes of secondary reserves. In fact, bank holdings of Treasury notes are far in excess of their investments in bills, which is probably explained by the fact that the notes yield a considerably higher return than Treasury bills and are still of reasonably short maturity. On June 29, 1940, the insured commercial banks of the country held \$2,698,508,000 of Treasury notes as compared with \$805,453,000 of Treasury bills. On approximately the same date (June 26), the Federal Reserve banks held \$1,130,125,000 of Treasury notes and no bills whatever.

HIGH GRADE BONDS

Marketability essential.—The last group of investments purchased by the banks in the open market consists of high grade, readily marketable bonds. It should be emphasized that a quick, close market is essential for bonds so held by the commercial banks. In buying bonds, the banks are furnishing long-term investment credit and can only hope to turn such securities into cash through sale in the market. If the bonds purchased for secondary reserves are dealt in regularly on an organized exchange, the banks will have no difficulty disposing of them at the prevailing market price.

Types of bonds.—Foremost among the bonds deemed suitable as secondary reserve investments are the obligations of the United States. These long-term government securities are generally to be considered safe and readily marketable, but, having long maturities, they are subject to greater price fluctuations than Treasury bills or certificates. There are also certain issues of bonds guaranteed by the government which are held by the banks in substantial amounts. On June 29, 1940, all insured commercial banks held \$9,026,826,000 of Treasury bonds and \$3,370,098,000 of government guaranteed securities. Both of these types of bonds have the advantage of being eligible as security for advances

from the Federal Reserve banks in addition to their marketability.

Besides government and government guaranteed bonds, the bonds of railroads and public utilities are considered suitable investments for secondary reserves when they are of high grade and have an active market. Some industrial bonds may also at times be safely purchased, although, as a group, they are not so satisfactory as the rails and utilities. State and municipal bonds frequently do not have a sufficiently active market to constitute good secondary reserves and the same is true of real estate bonds and mortgages.

Liquidity and Safety.—Long-term investment bonds are not self-liquidating, but acquire liquidity for the individual banker through their salability. If readily marketable, they can always be sold at the prevailing price, barring the closure of the stock exchange, which is not at all likely to occur. As regards liquidity, then, such investments are quite satisfactory.

With respect to safety, there can be little question, so far as ultimate payment is concerned, if the bonds purchased are strictly high grade. The banker, however, is interested in changes in the selling price of his bonds, for he will lose if he has to sell his securities at prices lower than those at which they were purchased.

As a matter of fact, the banks are not good bond buyers. In periods of dull business and low money rates, the price of high grade bonds tends to rise and the yield to decrease. Yet such are the times when the banks have surplus funds to invest in considerable amounts. As business activity increases and money rates tighten, high-grade bond prices fall and the banks, being pressed for funds to make added loans, have to sell some of their bonds at the existing lower prices. This tendency may be observed by comparing bank investments with any good index of high-grade bond prices over a period of years.

We must conclude, then, that high-grade bonds, while they may be easily liquidated, are unsatisfactory with respect to safety in that the banker is likely to suffer significant losses from the sale of bonds purchased at an earlier date.

In time of crisis, even the best bonds may subject the banks to heavy losses if liquidation is attempted. Thus, near the

close of 1931, the widespread desire of banks to strengthen their cash positions led to a concerted liquidation of bonds which broke the market and caused heavy losses to bankers. In more normal times this is not likely to occur, although the banks generally are poor bond buyers and sellers for the reasons noted in the preceding paragraphs.

COMPARISON OF OPEN MARKET YIELDS

Yield of secondary importance.— Since most of the commercial banks' investments in the open markets are for the purpose of acquiring secondary reserves, the question of yield is bound to be of minor importance as compared with the major requirements of safety and liquidity. Thus Treasury bills and bankers' acceptances are considered ideal as secondary reserves in spite of their low yields because of their great safety and liquidity. But, although yield is not the primary consideration with bankers, it is not to be left out of account entirely. If two open market investments are equally desirable in other respects, for example, the one with the higher yield would be most satisfactory when obtainable.

Comparative yields.— For purposes of comparison, Table XXI shows the interest (or discount) rate on various classes of open market investments and the yield on certain high-grade bonds. Yearly averages are used in order to make the comparison somewhat simpler, since the different short-term rates show rather widely varying week-to-week or month-to-month fluctuations.

In analysing the data presented in the table, it will be advisable to distinguish between the first and last part of the period covered. As might be expected, short-term Treasury obligations and bankers' acceptances show the lowest yields throughout the entire period with the exception of 1928 and 1929 when the yield on Treasury bonds was less than on Treasury bills and certificates. On the average, however, in the first eight years of the period, there is not much to choose between commercial paper, call loans, and high-grade corporate bonds as far as yield is concerned. This was not the case in the latter years of the period, when the yield on both Treasury and high-grade corporate bonds was much higher than on either commercial paper or call loans. Accordingly,

an analysis of comparative yields in the pre-depression period would lead to conclusions that would not be valid for the later years. Bearing this in mind, we may consider the question of yield on the basis of the more normal money conditions which prevailed before 1930.

TABLE XXI
INTEREST RATE, DISCOUNT OR YIELD ON—

<i>Average for Year</i>	<i>4-6 mo. commercial paper</i>	<i>Bankers' Acceptances 90-days</i>	<i>Call loans (renewal)</i>	<i>Treasury obligations 3-6 mo.</i>	<i>Treasury bonds</i>	<i>30 AAA corporate bonds</i>
1922	4.43	3.51	4.29	3.47	4.30	5.12
1923	4.98	4.10	4.85	3.93	4.36	5.12
1924	3.91	2.98	3.08	2.77	4.06	5.00
1925	4.03	3.28	4.20	3.03	3.86	4.88
1926	4.24	3.60	4.50	3.25	3.68	4.73
1927	4.01	3.45	4.06	3.11	3.34	4.57
1928	4.84	4.09	6.05	3.92	3.33	4.55
1929	5.78	5.02	7.62	4.42	3.60	4.73
1930	3.56	2.46	2.94	2.23	3.28	4.55
1931	2.64	1.58	1.74	1.15	3.31	4.58
1932	2.84	1.28	2.05	0.78	3.66	5.01
1933	1.87	0.60	1.18	0.26	3.31	4.49
1934	1.02	0.25	1.00	0.26	3.10	4.00
1935	0.76	0.13	0.56	0.14	2.70	3.60
1936	0.75	0.15	0.91	0.14	2.65	3.24
1937	0.95	0.43	1.00	0.28	2.68	3.26
1938	0.81	0.44	1.00	0.07	2.56	3.19
1939	0.59	0.44	1.00	0.05	2.36	3.01
1940	0.56	0.44	1.00	0.04	2.21	2.84

Average yield on Treasury bills, 4-6 mo. in 1931, 6-9 mo. in 1935-1936, 91-da. dealers' quotation in 1937-1940.

Sources: Short-term rates through 1933 are from data compiled by the Standard Statistics Company. Yields on Treasury bonds, 30 AAA corporate bonds, and average short-term rates 1933-1936 are from the *Annual Report of the Board of Governors of the Federal Reserve System*, 1935 and the *Federal Reserve Bulletin*, May 1937. All data for 1937-1940 are from the *Federal Reserve Bulletin*, November 1940.

During the first eight years of the period, the average rate on commercial paper was 4.53 per cent, as compared with 4.83 per cent on call loans and 4.84 per cent on high-grade corporate bonds. Commercial paper, however, over a long series of years had shown much smaller losses than high-grade bonds.⁸ Furthermore, it is purchased on a flat discount basis, while a commission may have to be paid for the bonds purchased by a bank. For all except the New York banks also a charge of not less than 5 per cent of the interest

⁸ See Rodkey, R. G., *The Banking Process*, p. 149.

received was made on call loans placed for interior institutions, which lowered the yield to the latter.⁴ Everything considered, taking safety, liquidity and yield all into account, commercial paper appears to have been more satisfactory than either bonds or call loans as an open market investment. Commercial paper was also eligible for rediscount when within ninety days of maturity which gave it an added liquidity not possessed before the establishment of the Federal Reserve system.

In the last seven years of the period covered in the table, money rates have been so extremely low that yield necessarily assumed added importance. Moreover, aside from Treasury bills which yielded practically nothing, the volume of funds in the short-term markets was comparatively small and the banks had large excess reserves seeking investment. Under the circumstances, they absorbed the bulk of the short-term paper available and made large bond investments as well.

Conclusion.—The part played by the Federal Reserve system in building up the acceptance market, in supporting the call loan market in 1929 and in adding to the liquidity of commercial paper has been noted in the preceding pages. In a sense the Federal Reserve system has increased the liquidity of all open market investments by its support and has thus aided the banks of the system. In the three following chapters we shall consider other phases of Federal Reserve policy which have played an important part in the recent development of the American banking system.

REFERENCES

- Beckhart, B. H. *The New York Money Market*, Vol. III. New York. 1932.
Dice, C. A. *The Stock Market*. Chicago. 1926.
Foulke, R. A. *The Commercial Paper Market*. New York. 1931.
Fry, M. H. *Bank Acceptances as an Investment*.
Greef, A. O. *The Commercial Paper House in the United States*. Cambridge. 1938.
Griffis, B. *The New York Call Money Market*. New York. 1925.

⁴ This statement applies to the period prior to September 10, 1929. On that date the charge was altered to $\frac{1}{2}$ of one per cent per annum. A similar charge was exacted on "loans for others" between September 1, 1928, and November 16, 1931. After the latter date the clearing house banks ceased to place such loans, nor are member banks allowed to place loans for others under the Banking Act of 1933.

Huebner, S. S. *The Stock Market*. New York. 1922.

Madden, J. T. and Nadler, M. *International Money Markets*.

Meeker, J. E. *The Work of the Stock Exchange*. New York (Revised Edition). 1930.

Phillips, C. A. *Bank Credit*.

Riefler, W. W. *Money Rates and Money Markets in the United States*.

Rodkey, R. G. *The Banking Process*.

Acceptance Bulletin.

Facts and Figures Relating to the American Money Market. (American Acceptance Council.) 1931.

CHAPTER XXII

CHECK COLLECTION AND RESERVES

Introduction.—Early in its career the Federal Reserve Board set out to remedy one of the major defects of the old national banking system by attempting to establish a universal system of par collection of checks throughout the United States. The unsatisfactory reserve organization under the national banking system was altered for the better by the terms of the Federal Reserve Act itself, but the existing system is not entirely satisfactory and the Federal Reserve Board has recommended certain changes in member bank reserve requirements. The present chapter will be concerned with these two aspects of the operation of the Federal Reserve system.

THE COLLECTION OF CHECKS

The development of the Federal Reserve collection system.—As already noted in an earlier connection (Chapter IX), the Federal Reserve Act gave the Federal Reserve Board the power to act, directly or through one of the Reserve banks, as a clearing agency for the Federal Reserve banks, and to require each Reserve bank to act in the capacity of a clearing house for the member banks of its district. Under this authority the Board early took measures with a view to establishing a comprehensive and economical system of check collections for the banks of the United States.

The Gold Settlement Fund.—The first decisive step in the procedure of the board was the establishment, in May 1915, of the Gold Settlement Fund to assist in the clearing and collection of inter-district checks. Prior to this time inter-district settlements had been made through reciprocal accounts carried by the Reserve banks with each other. The

increase in the number of inter-district items, however, made some less unwieldy method of settlement essential.

Under the original plan each Federal Reserve bank was required to deposit with the Federal Reserve Board \$1,000,000 in gold plus the amount it owed to all the other Reserve banks at the time the deposit was made. These amounts were to count as part of the Reserve banks' gold reserves, a record of each bank's holdings of gold being kept on the books of the fund by a settling agent appointed by the Federal Reserve Board. After the original deposits had been made no Reserve bank was required to keep more than \$1,000,000 in the fund, being permitted to withdraw any surplus over that figure if desired. With the growth in inter-district settlements, however, much larger amounts have been deposited in the fund than were originally required. On the date of the first settlement, May 27, 1915, the amount in the fund was \$18,450,000.¹ After the War, the fund averaged about \$500,000,000 until 1934. Since the passage of the Gold Reserve Act of 1934, the Reserve banks have kept practically their total gold certificate reserves divided between the Interdistrict Settlement Fund² and the Federal Reserve Agents' Fund, the amount in the former fund being over \$8,000,000,000 at the close of 1939.

The institution of the Gold Settlement Fund greatly facilitated inter-district settlements by providing a clearing system for the twelve Reserve banks. As the fund operates, each Federal Reserve bank and clearing branch periodically wires the settlement agent the amount which it owes to each other bank. These amounts are then entered on a regular clearing sheet, canceled so far as possible, and favorable or unfavorable balances credited or debited to the banks receiving them on the books of the Gold Settlement Fund. When the fund was first established, settlements were made weekly—at the close of business on Wednesdays—but with the installation of a leased wire system in June 1918, together with a large increase in the amount of inter-district settlements, it became possible and desirable to adopt a

¹ Spahr, *The Clearing and Collection of Checks*, p. 170.

² The name of the fund was changed from Gold Settlement Fund to Interdistrict Settlement Fund in the Annual Report of the Board of Governors for 1935.

system of daily settlements. Such a system was accordingly introduced on July 1, 1918. After this it also became feasible to develop a system of telegraphic transfers of funds whereby each Federal Reserve bank was enabled to transfer funds without charge to other districts by wire for its member banks, settlements of such transfers being made through the Gold Settlement Fund as in the case of checks.

The Federal Reserve Agents' Fund, which was established on September 8, 1915, was designed to facilitate the transfer of gold, by means of book entries, between the Federal Reserve agents and the Federal Reserve banks, or between either agents or banks and the Treasury, in connection with the issuance and retirement of Federal Reserve notes. The technique of its operation is similar to that of the Gold Settlement Fund and needs no detailed consideration.

The voluntary system of intra-district collection and clearing.— Directly after the institution of the Gold Settlement Fund, the first step was taken in connection with the establishment of a satisfactory intra-district clearing system. As it was not deemed desirable to interfere too greatly with existing collection methods during the period allowed for member banks to transfer their reserves from correspondent institutions to the Federal Reserve banks, the first plan for intra-district collection and clearing introduced by the Board was voluntary rather than compulsory. The Board did not attempt to specify the exact methods to be employed, but merely required that, by June 1915, each Federal Reserve bank should be prepared to act as a clearing house for such member banks of its district as desired to avail themselves of this facility. Prior to this date, two Federal Reserve banks—Kansas City and St. Louis—had, on their own initiative and with the approval of the Federal Reserve Board, established compulsory clearing systems for member banks in their respective districts. The Kansas City bank continued its compulsory system after June 1915, and, while the Federal Reserve Bank of St. Louis made membership in its system optional after that date, some 80 per cent of the member banks of the district elected to remain in the system.³

In each of the remaining districts a voluntary system was

³ Spahr, *op. cit.*, p. 168.

introduced at the time fixed by the Federal Reserve Board. The typical procedure followed was for the Reserve bank of the district to receive on deposit at par from member banks, and for immediate credit, checks on such other banks in the district as had elected to join the system. Upon receipt of such checks, the Reserve bank would not only immediately credit the accounts of the payee banks, but would also debit the accounts of the drawee banks before sending the checks to the latter to be debited to the accounts of the drawers.⁴ This method of immediate debit and credit on the books of the Reserve bank was satisfactory neither in principle nor in practice. It was wrong in principle because a check, which is a written order to pay a certain amount, should not logically be paid by the bank on which it is drawn until the latter is in receipt of said order. It was disconcerting in practice because the drawee banks were never able to know the state of their balances at the Reserve bank which might be overdrawn at any time as a result of the practice of immediate debit. Whether for this reason, or simply because the member banks preferred to use the old, accustomed methods, the voluntary system was not a success. But few banks chose to enter the system, and it was abandoned the following year in favor of a system which was compulsory for all member banks.

The compulsory clearing and collection system.—This system, which was introduced in July 1916, was compulsory in certain respects only. Under it member banks were required to pay at par all checks drawn on and presented to them through the Federal Reserve banks of their districts. Receipt of checks by the drawee banks from their Federal Reserve bank through the mails was to be considered as presentation at their counters. The drawee banks might pay such items by draft on their accounts at the Reserve bank (or by authorizing the Reserve bank to debit their accounts), by other checks and drafts acceptable to the Reserve bank, or by shipment of currency. When currency was shipped the expenses attendant upon the shipment were to be borne by the Reserve bank, thus relieving the drawee banks of any possible expense in connection with the payment of checks at par.

To this extent the system was compulsory. On the other

⁴ *Ibid.*, p. 172.

hand, no member bank was required to collect its out-of-town checks through its Federal Reserve bank. Collection through correspondent channels was still permitted if desired and, as a matter of fact, a goodly number of member banks continued to use the older method of collection until after the concentration of reserves in the Federal Reserve banks under the amendment of June 21, 1917.

Aside from the element of compulsion the most significant change brought about by the new system was the substitution of deferred availability for the immediate credit feature of the voluntary systems. As already noted, the drawee banks were required, under the compulsory system, to remit to the Reserve banks at par upon receipt of checks sent to them by the latter for payment. The accounts of the drawee banks were accordingly not debited at the Reserve bank until the latter had received advice of payment from the drawee or until sufficient time had elapsed for it to receive such advice. In accordance with this procedure, the banks sending checks to the Federal Reserve bank for collection were given a deferred credit at the Reserve bank upon receipt of such checks. This credit did not become available as reserve until sufficient time had elapsed for the Reserve bank to collect the checks from the drawee banks.

In order to make the deferred credit plan workable in practice, availability schedules have been prepared by each Federal Reserve bank which show the length of time necessary to collect a check on any point in the United States. The schedule of each Reserve bank for its own district is supplemented by a time schedule showing the collection time for checks between various Reserve banks and their branches, so that the entire country is adequately covered. The time allowed for collection is based on the average time required for the collection of checks on banks in given zones or areas, and the reserve accounts of the banks sending in checks for collection are credited at the Reserve banks at the expiration of the average collection period, even though, in some instances, particular checks may require more than the average time for collection. In the latter event, the Reserve bank carries a float (i.e., uncollected items) for a period equal to the difference between the average and the actual time of collection.

This practice is unavoidable if the system is to prove workable, as it would be inexpedient to operate on a schedule of actual collection time for every bank in the country.

The par remittance controversy.—The Federal Reserve Act, as amended by the Act of September 7, 1916, authorized each Federal Reserve bank to receive from member banks or from other Federal Reserve banks for exchange or collection checks or drafts payable upon presentation on *any bank* in its district. This implied that Federal Reserve banks were not only to accept for collection checks on non-member banks in their districts, but also that they were to use whatever lawful means were necessary to collect such checks at par.⁵ Accordingly the Reserve banks made an attempt to develop a system of par collection for the country as a whole. This attempt was furthered by the amendment to the Federal Reserve Act of June 21, 1917, which concentrated the reserves of member banks in the Federal Reserve banks and paved the way, through lessened restrictions, to a large increase in state bank membership in the system. This act also provided that non-member banks might establish clearing accounts with, and hence collect checks through, the Federal Reserve banks in the same fashion as member banks. Finally, the Hardwick amendment of this date granted member and non-member banks the right to levy exchange charges of $\frac{1}{10}$ of 1 per cent, but provided that “no such charges shall be made against the Federal Reserve banks.” It was obvious from the wording of this amendment that when checks were presented to drawee banks by the Federal Reserve banks for payment no exchange deduction was permissible.

The Federal Reserve banks, believing with the Federal Reserve Board that they were impliedly required by the law to collect checks on all banks at par, adopted measures to accomplish the desired result. They bent every effort to make par remittance as easy and inexpensive as possible. Drafts on solvent member banks constituted acceptable remittances by non-members and, if currency had to be shipped, the cost of such shipment was borne by the Reserve banks. Nevertheless, many of the smaller banks, particularly in the South and West, objected to remitting at par and refused to

⁵ *Ibid.*, p. 196.

consider checks received from the Reserve banks through the mails as being presented for payment at their counters. In such instances the Reserve banks employed agents, such as some bank or express company, actually to present the checks in person to the drawee banks in order to force the latter to pay them at par. This procedure was naturally irritating to the exchange-charging banks, and in certain states the legislatures even passed laws authorizing the state banks to charge exchange, at their discretion, on checks presented at their counters when such checks were presented by the agent of a Federal Reserve bank or other banking institution. Some of the banks also brought suit against certain Federal Reserve banks to test the legality of the practices resorted to by the latter.

Space does not here permit a detailed account of the several court decisions affecting the remittance for checks at par.⁶ It will suffice merely to sum up the results of these decisions. In the first place, it was decided that the Federal Reserve banks, acting through agents, had the right to present checks over the counters of the drawee banks if, in so doing, they did not accumulate undue amounts of checks for the purpose of forcing the drawee banks to remit at par. Secondly, it was decided in another case that it was not permissible for the Reserve banks to use coercive methods which are out of line with regular business procedure to compel remittance at par from non-member banks. Thirdly, the constitutionality of the state laws permitting the charging of exchange was upheld unless the drawer of the check specifically required its payment at par in cash. Lastly, the legality of the procedure of the Reserve banks with respect to par collection from member banks was upheld in every particular.

In view of these decisions, the Federal Reserve banks were forced to modify their attempt to establish a universal system of par collection. Under the revised procedure, the Reserve banks refuse to accept for collection checks drawn on non-member banks which will not remit at par. Checks on these banks must then be collected by the payee banks through correspondent channels as formerly. Although the usefulness of the Reserve bank collection system is thus somewhat re-

⁶ See *ibid.*, Chapter VII, for a detailed and careful discussion of this controversy.

duced, the reduction is not serious. This is shown by the fact that, on December 31, 1939, all but 2585 banks out of a total of 14,345 were remitting at par. Still more significant, from the point of view of the collection system, is the fact that most of the non-par banks are very small institutions, so that the number of checks drawn on them is insignificant as compared with the total of checks drawn on all banks in the country.

Current collection methods.—The methods employed under the Federal Reserve collection system have been indicated in a general way in the foregoing pages. In concluding this section of the chapter, however, the contrast between the old and the new systems, and the advantages of the latter over the former, may best be emphasized by a somewhat more precise description of the operation of the existing system than has yet been given.

Intra-district collections.—The typical procedure in the collection of intra-district items is for the payee bank to send its out-of-town checks and items to its Federal Reserve bank where it receives a deferred credit for the amount of the checks sent in. These checks are then sent by the Reserve bank to the drawee banks who remit for them at par to the Reserve bank. After the time shown by the availability schedule has elapsed, the payee bank's reserve account is credited, and either the drawee banks' accounts are debited upon receipt of advice of payment of the checks, or payment is made with a draft or currency sent by the drawee banks to the Federal Reserve bank.

This procedure is shown diagrammatically in the upper portion of Figure 19. A considerable saving of time may be effected in certain instances if an arrangement is made under which the payee bank sends checks directly to the drawee, at the same time notifying the Reserve bank of the transaction as shown in the lower section of the diagram. This plan has had a wide use in the second, and, to a lesser extent, in the third Federal Reserve districts.⁷

In the eleventh district (Dallas), by arrangement between the Reserve bank and the Reserve City Clearing House Association of Texas, a somewhat similar plan is in use. Any

⁷ *Ibid.*, p. 187.

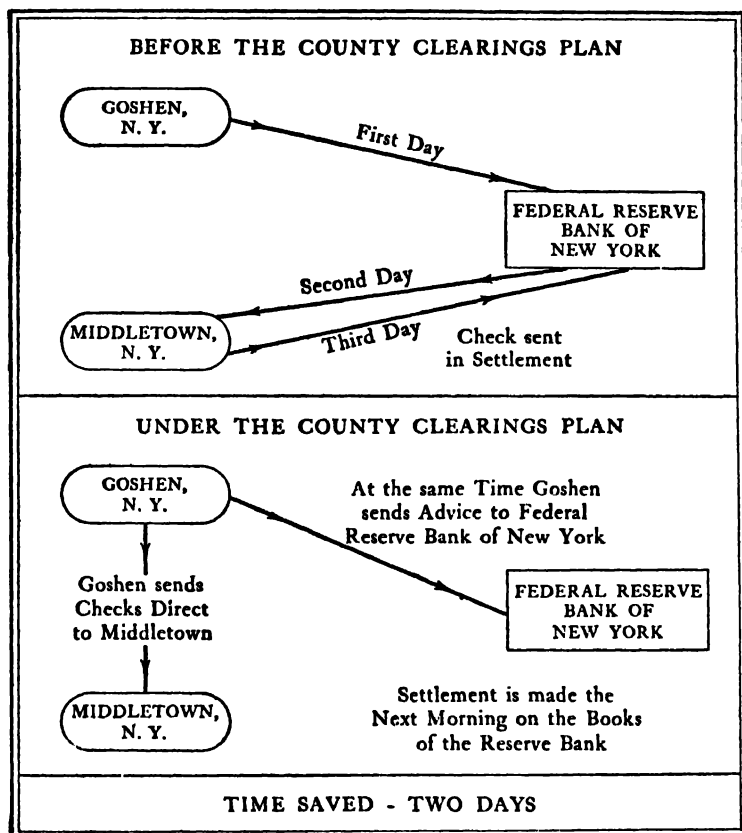


FIG. 19

(Courtesy of the Federal Reserve Bank of Philadelphia)

member of the association, or the country correspondent of a member, sends all of its checks on the banks of a particular reserve city to a member of the association for collection, at the same time sending a draft on the latter to the Federal Reserve Bank of Dallas. The Reserve bank then credits the account of the payee bank for the amount of the draft and debits the account of the reserve city bank against which the draft is drawn, with a consequent marked saving of time in the collection of checks drawn against reserve city banks.⁸

Inter-district collections. — In collecting a check on a bank in another Federal Reserve district, the payee bank typically

⁸ *Ibid.*, pp. 188-189.

sends the check to its own Reserve bank where it receives a deferred credit for the amount. The check is then forwarded to the drawee's reserve bank and collected from the drawee bank by the Reserve bank in the same fashion as an intra-district item. At the expiration of the time shown on the availability schedule, the payee bank's reserve account is credited by its Reserve bank, and the latter receives a credit from the drawee's Reserve bank when the check has been paid by the drawee. The settlement of balances among the reserve banks themselves is effected each day through the Gold Settlement Fund as already explained.

While the procedure just described is typical, certain time-saving devices have also been employed to facilitate inter-district collections. When more convenient, the payee bank may send checks to a branch of its Federal Reserve bank instead of to the Reserve bank itself, the settlement of transactions of this sort being cared for by means of book-keeping entries on the part of the branch and parent banks. Still more expeditious, in some instances, is the plan whereby the payee bank, by arrangement with its Reserve bank, sends its out-of-district checks directly to the Reserve banks of the drawees' districts, at the same time notifying its own Reserve bank of these transactions. Finally, in a very few cases, where a large saving of time would result, the payee bank by special arrangement sends checks directly to drawee banks in other districts, the latter remitting directly to their own Reserve banks.⁹

Comparison with the old system.—The foregoing description of present collection methods under the Federal Reserve System demonstrates clearly their superiority to earlier methods. Since January 1, 1918, the Reserve banks have made no charge for the collection of checks, so that the banks of the country now enjoy without cost to themselves the benefits of an efficient and direct system of collection in striking contrast to the clumsy and expensive methods of earlier years. Through the Federal Reserve banks and the Gold Settlement Fund the cancellation of claims through the clearing process has been carried to a remarkable degree, with consequent economy in the need for gold and lawful money in the bank-

⁹ *Ibid.*, p. 192.

ing process. Furthermore, the Reserve banks have developed a system for the collection of time items which is practically gratuitous and which supplements and broadens the usefulness of their check collection system. Even non-member banks, through their correspondent members, may and do make use of the Federal Reserve collection facilities, so that the system serves practically the entire country. While payee banks may still, and sometimes do, levy a charge against the depositors of out-of-town checks to compensate for the loss of interest while the checks are in the process of collection, this is a perfectly legitimate charge which is not open to criticism. The fundamental evil of the old system—the deduction of an exchange charge by drawee banks—has been eliminated in all but a few small banks of minor significance.

RESERVES UNDER THE FEDERAL RESERVE SYSTEM

The transition period.—The Federal Reserve Act was designed, among other things, to eliminate the defects which have been described in Chapter VIII. Under the original act reserve requirements were reduced for each class of banks, and the reserves were to be kept partly in cash in the banks' own vaults and partly with the Federal Reserve banks in the proportions noted in an earlier chapter (Chapter IX). In order not to disturb existing conditions too suddenly, a period of three years was allowed in which the transfer of reserve balances from correspondents to the Federal Reserve banks might be effected.

The amendment of 1917.—The banking system was not destined to test the effectiveness of the original Federal Reserve regulations which divided the final reserves of the country between the member institutions and the Federal Reserve banks. Before the three-year transition period had elapsed, the amendment of June 21, 1917, again changed the requirements. Legal reserves were lowered to 13, 10, and 7 per cent of demand deposits for central reserve city, reserve city, and country banks respectively, and 3 per cent of time deposits for all classes of banks. In addition, all legal reserves were required to be kept in the form of deposits with the Federal Reserve banks.

Reduction in working reserves.—This marked reduction in legal reserve requirements did not bring with it a corresponding decrease in working reserves for two reasons. First, cash in vault, which is an essential part of every bank's working reserve, could not be counted as legal reserve under the 1917 amendment. Secondly, the banks would still find it necessary or desirable to maintain some balance with other banks than the Federal Reserve banks, but such balances were, along with cash, excluded from legally required reserve. Nevertheless, working reserves were considerably lessened as a result of the changed legal requirements. Table XXII, adapted from an analysis of reserve requirements by Mr. George J. Seay, Governor of the Federal Reserve Bank of Richmond,¹⁰ will serve to show the real change in the ratio of working reserves to gross deposits which was effected under the operation of the Federal Reserve System.

Earlier defects eliminated.—It was possible to accomplish the reduction in reserves which has been described and, at the same time, to increase the efficiency and safety of the banking system by removing the defects which had prevailed prior to 1914. Reserves are now concentrated, not in the commercial banks of New York City, but in the twelve Federal Reserve banks. The latter are essentially non-profit-making institutions, may not pay interest on deposits, are required to keep large cash reserves, and are so hedged around with restrictions as to insure the liquidity of their loans and investments. They are thus much better suited to act as reserve agents than were the New York banks in earlier years.

The reasons for the unduly large working reserves under the national banking system have been removed in part. The present system of clearing and collection has removed the necessity for the maintenance of a large number of correspondent accounts and of large compensating balances. The fact that correspondent balances are still fairly large, although relatively smaller than under the old system, is to be explained in several ways. Even at present non-

¹⁰ This analysis was published in 1925 by the Federal Reserve Bank of Richmond in connection with a series of letters to college classes in economics and banking on *The Practical Operations of the Federal Reserve System*. Part of the analysis was contained in Letter 18, part in supplementary studies.

CHECK COLLECTION AND RESERVES 465

TABLE XXII

REDUCTION IN WORKING RESERVES PER CENT OF GROSS DEPOSITS
NATIONAL BANKS

	<i>Central Reserve City Banks</i>		<i>Reserve City Banks</i>		<i>Country Banks</i>	
	1909-1913	1922-1923	1909-1913	1922-1923	1909-1913	1922-1923
Cash on hand.....	20.4	1.4	11.4	1.7	7.9	2.7
Due from other banks...	9.6	2.7	24.5	9.9	18.6	8.8
Balances and items in process of collection with Federal reserve banks..	....	12.8	....	12.1	..	6.1
<i>Total as above</i>	30.0	16.9	35.9	23.7	26.5	17.6
Reduction in reserves maintained.....	13.1		12.2		8.9	

NATIONAL AND STATE BANKS					
	<i>June 30, 1914</i>		<i>June 30, 1922</i>		
	<i>National Banks</i>	<i>State Banks</i>	<i>National Banks</i>	<i>State Banks</i>	
				<i>Members</i>	<i>Non- members</i>
Cash	11.9	6.7	2.0	1.5	3.3
Due from banks	16.2	14.8	7.6	4.4	12.7
Reserve with Federal re- serve banks .....	....	....	7.0	7.4	....
Items in Process of Collec- tion with Federal reserve banks .....	....	....	2.2	1.5	....
<i>Total reserve</i>	28.1	21.5	18.8	14.8	16.0

member banks must collect out-of-town checks through correspondents and have to maintain balances for this reason. Furthermore, a number of member banks collect through correspondents by preference instead of using the Reserve bank facilities directly. Again, there is still a need for balances in New York to meet the demands of customers for New York drafts and to provide foreign exchange connections—not furnished by the Reserve banks—for interior banks. Finally, prior to 1933 the payment of interest by correspondents made it seem desirable to keep the smallest possible deposit with the Reserve banks in order to earn the interest on surplus reserve funds deposited with correspondents. Balances with correspondents accordingly persist, but are of relatively much less significance than formerly.

The fictitious element has been largely eliminated from

the reserves of member banks since checks in the process of collection can no longer be counted as part of the legally required reserve. While member bank reserve requirements are as rigid as ever, the ability to build up reserves by borrowing at the Reserve banks eliminates almost entirely the evil effects of this rigidity.

Perhaps more important than any of these other factors is the fact that the banking reserves of the country are now under centralized control. Each Federal Reserve bank holds the final reserves for its district, while the reserves of the different Federal Reserve banks have been mobilized by the provision that the Federal Reserve Board may require these banks to lend to one another in time of stress, thereby equalizing the reserves for the country as a whole. In addition, the Federal Reserve Board is empowered to suspend any reserve requirement of the Federal Reserve Act in time of emergency, so that reserves may be used if needed as they could not be under the old system.

Existing defects. — In spite of the far-reaching improvements which the Federal Reserve System has wrought in the organization of reserves in the United States, there remain certain defects which are in need of elimination. Of chief importance among these is the method of basing the legal reserve required on the location of the banks. The old classification of central reserve city, reserve city, and country banks, while possessing a certain significance under the earlier system, became meaningless when carried over into the Federal Reserve Act. St. Louis was reclassified as a reserve city, effective July 1, 1922, and since that date there have been but two central reserve cities, New York and Chicago. The number of reserve cities in June 1930 was 63, and banks located elsewhere are known as country banks. Yet many of the latter group are both larger banks and located in larger cities than are some of the institutions of the reserve city group. In like manner, some of the larger reserve city banks are equal in importance to at least a few of the banks located in New York and Chicago. Moreover, the type of business done by different banks throughout the country does not vary uniformly with their location by any means. It seems obvious, therefore, that

the present grouping of banks for the determination of reserve requirements is illogical and, in many instances, unjust, and that the situation should be remedied by the adoption of some other method of determining required reserves.

The Reserve Committee proposal.—The matter of reserve requirements had been for some time under the consideration of a committee, appointed by the Federal Reserve Board and known as the Committee on Bank Reserves of the Federal Reserve System.¹¹ In November 1931, the report of this committee was released for publication. Although Congress failed to adopt the suggestions of the committee, the report contained such significant recommendations for alterations in the method of determining member bank reserves that it is worthy of somewhat extended consideration. Accordingly it seems highly desirable to include at this point those passages from the report which contain a summary of the committee's recommendations :

Defects of present reserve requirements.—In the opinion of the committee, our present system of legal requirements for member bank reserves has never functioned effectively since its inception in 1914. It has not operated to relate the expansion of member bank credit to the needs of trade and industry, nor has it adequately reflected changes in the volume and activity of member bank credit. Furthermore, the committee also finds that present requirements for reserves are inequitable and unfair as between individual member banks and groups of member banks and do not adequately take into account genuine differences in the character of banking in which a member bank may be engaged.

The committee takes the position that it is no longer the primary function of legal reserve requirements to assure or preserve the liquidity of the individual member bank. The maintenance of liquidity is necessarily the responsibility of bank management and is achieved by the individual bank when an adequate proportion of its portfolio consists of assets that can be readily converted into cash. Since the establishment of the Federal reserve system, the liquidity of an individual bank is more adequately safeguarded by the presence of the Federal reserve banks, which were organized for the purpose, among others, of increasing the liquidity of member banks by providing for the rediscount of their eligible paper, than by the possession of legal reserves. The two main functions of legal requirements for member bank reserves under our present banking structure are, first, to

¹¹ The members of the committee consisted of E. L. Smead, Ira Clerk, M. J. Fleming, E. A. Goldenweiser, L. R. Rounds, and W. W. Riefler, Executive Secretary. The paragraphs which follow are quoted directly from the report of this committee as published by the Federal Reserve Board "for the information of member banks of the system and others interested in the subject."

operate in the direction of sound credit conditions by exerting an influence on changes in the volume of bank credit, and, secondly, to provide the Federal reserve banks with sufficient resources to enable them to pursue an effective banking and credit policy. Since the volume of member bank credit needed to meet the legitimate needs of trade and industry depends on the rate at which credit is being used as well as on its aggregate amount, it is essential for the exercise of a sound control that legal requirements differentiate in operation between highly active deposits and deposits of a less active character. Requirements for reserves should also be equitable in their incidence, simple in administration, and, so far as possible, not susceptible of abuse.

Similar principles underlie the present reserve law, which in requiring lower reserves against time deposits than against demand deposits, and lower reserves against the demand deposits of country banks than against the demand deposits of reserve and central reserve city banks may have been expected to impose higher reserves on more active deposits than on less active deposits. Notwithstanding the fact, however, that existing requirements would appear to be so arranged as to make reserve requirements vary with the volume and activity of deposits, experience shows that since 1914 and especially since 1922 the proportion of primary reserves held by member banks has steadily declined in relation to the volume of member bank deposits and to their activity.

This outcome has been the result of defects in the definition of reserves, in the method of determining liabilities against which reserves must be carried, and in the classification of banks and of deposits for reserve purposes. The exclusion of vault cash from required reserves of member banks in 1917 has been followed by a reduction in the vault cash holdings of some city banks to a minimum; the rule that amounts due from banks may be deducted only from amounts due to banks has tended to decrease reserves in times of business activity and to increase reserves in times of depression, and the establishment of a low reserve against time deposits in 1914 has facilitated the growth of bank credit without a corresponding growth in reserves. Even if these particular defects in the present system of reserves had not existed, however, the rapid increase in the turnover of demand deposits which has occurred in recent years would still have tended to prevent reserve requirements from increasing in proportion to the growth in the effective use of credit by the customers of member banks.

Proposals of the committee.—Before deciding to recommend fundamental changes looking toward the establishment of a new basis for calculating required reserves, the committee made every effort to frame provisions designed to correct the existing situation through modifications in the classification of cities for reserve purposes and in the classification of deposits subject to reserve, including a more stringent definition of time deposits. As these proposals were studied, however, it became more and more evident that they would not be effective and that an entirely new approach to the reserve problem was necessary.

The committee proposes, consequently, to abolish completely the classification of deposits into time and demand deposits, and the classification

CHECK COLLECTION AND RESERVES 469

of member banks according to their location, into central reserve city banks, reserve city banks, and country banks. Instead, the committee recommends that all member banks and all deposits be treated alike for reserve purposes, and that the formula used in calculating reserve requirements take into account directly, instead of indirectly as in the existing law, the activity as well as the volume of the deposits held by each individual member bank, without regard to the location of the bank or the terms of withdrawal on which the deposits are technically held. To accomplish this, the committee proposes that each member bank be required to hold a reserve equivalent to (a) 5 per cent of its total net deposits, plus (b) 50 per cent of the average daily withdrawals actually made from all of its deposit accounts. These withdrawals, which are shown by debit entries on the books of member banks, are the only real test of the activity of a deposit account and furnish the only basis by which that activity can be equitably and effectively reflected in requirements for reserves. Under this proposal, therefore, each deposit will carry a total reserve based on its activity as well as on its amount. A totally inactive deposit will carry a total reserve of only 5 per cent, while a deposit balance which is checked out on the average once a week will carry a total reserve equivalent to 12 per cent of its amount. For the average member bank the total reserve under the proposed formula will be equivalent to about 8 per cent of its deposits. To prevent this formula from imposing too great a burden in extreme cases, the recommendations of the committee also provide that in no case shall the aggregate reserve required of a bank exceed 15 per cent of its gross deposits.

The committee proposes to include in legal reserves, in addition to the funds which member banks have on deposit with their Federal reserve bank, their vault cash, with certain limitations, as both classes of funds contribute to the strength of the reserve banks and have a direct effect on the reserve system's control of changes in member bank credit. It proposes also to place country member banks on a parity with city banks with respect to deductions from deposit accounts by permitting banks in calculating net deposits subject to reserve to deduct balances due from member banks and items in process of collection from total deposits instead of from balances due to banks alone, as is the practice at present.

Criticism of committee's proposal.—Although the foregoing proposal of the Committee on Bank Reserves was generally received with favor, it has been subject to criticism in some quarters. One major objection, which would seem to be valid in the light of the theory of reserves presented in Chapter XIII, is that regularity of withdrawals, rather than velocity of turnover, is the proper criterion for determining the size of reserves which banks should maintain against their deposits. Another pertinent criticism is that the Committee's proposal makes no allowance for varying

degrees of liquidity in the earning assets of different member banks, although it is incontrovertible that a bank with liquid assets requires a smaller reserve than one with slow loans and investments.

As far as these objections are concerned, however, it may be pointed out that it would be almost impossible to fix by law any general reserve requirements which could take into account varying degrees of regularity of deposit withdrawals or of liquidity of assets in various member banks. No reserve requirement applicable to all member banks is going to prove entirely satisfactory for every institution.

Moreover, it is true that *changes*, particularly *increases*, in velocity in any bank or in the banks of any section almost always indicate changes or increases in speculative activity. The Committee frankly admits that one of the major aims of the proposal is to give an indication to the Reserve banks of the development of speculative activity and thereby assist those banks to control credit expansion when such developments occur. The fact that the proposed plan would be valuable in this respect, together with the elimination of existing defects which it would accomplish, make the adoption of this or some similar plan desirable. Short of doing away with legal requirements altogether, the Committee's proposal seems to meet the needs of the situation in more satisfactory fashion than other suggestions which have been offered.

Renewal of recommendations.—The recommendations of the Committee on Bank Reserves were shortly transmitted to Congress by the Federal Reserve Board, but no action was taken to incorporate them in the Federal Reserve Act, no change in the then existing reserve requirements being included in the Banking Act of 1933. On March 23, 1934, Governor Black of the Federal Reserve Board renewed these recommendations on behalf of the Board as an amendment to the bill regulating the security exchanges. In spite of Governor Black's forceful statement in this connection, no action was taken by Congress to include the proposed plan in the security exchange bill.

Increases in reserve requirements.—The banking Act of 1935 incorporated two minor suggestions contained in the

report of the Committee on Bank Reserves, but again ignored the major recommendation that reserves should be based on volume and velocity of deposits. This act did provide, however, as already noted (Chapter X), that the Board of Governors might raise existing requirements to no more than twice their level at the time of passage of the act. As a result of huge gold imports, due to the undervaluation of the dollar, member bank reserves became so excessive that the Board of Governors took advantage of their newly acquired power to increase required reserves. On July 14, 1936, the Board increased reserve requirements on all classes of member bank deposits 50 per cent, effective August 15, 1936. The gold inflow continuing, however, this did not prove to be sufficient, and on January 31, 1937, the Board of Governors announced another increase of $33\frac{1}{3}$ per cent, which would bring requirements up to the limit fixed by the Banking Act of 1935. Half of this increase went into effect on March 1, 1937, and the other half on May 1st. As a result, required reserves were 26 per cent against demand deposits for the member banks in central reserve cities, 20 per cent in reserve cities, and 14 per cent for country banks, with a requirement of 6 per cent against time deposits in all classes of banks. As a result of the severe slump in business which began in the fall of 1937, the Board of Governors, in the spring of 1938, announced a reduction in required reserves, effective April 16th, in spite of the fact that excess reserves stood at over \$1,700,000,000 at that time. Required reserves were thus reduced to $22\frac{3}{4}$ per cent against demand deposits for central reserve city banks, $17\frac{1}{2}$ per cent for reserve city banks and 12 per cent for country banks, with a requirement of 5 per cent against time deposits for all member banks.

There is little question of the advisability of raising reserve requirements in 1936 and 1937 in view of the existing situation at that time. The reduction in 1938 was of much more doubtful wisdom. In any event, the reserve control provisions of the Banking Act of 1935 were far less desirable, as a long-run proposition, than those recommended by the Committee on Bank Reserves. Frequent arbitrary alterations in reserve requirements by the Board of Governors are

disturbing to the banks and are less scientific than the semi-automatic changes which would have taken place under the Committee's proposed plan. In view of the large volume of excess reserves existing in 1935, it might have been advisable to fix a higher minimum than the Committee's recommended 5 per cent, but this could have been done while still retaining the principle underlying the Committee's proposal.

Conclusion.—The preceding discussion has shown that the situation with respect to the collection of checks has been greatly improved under the operation of the Federal Reserve system, and that the reserve organization is superior to that existing prior to 1914 although not wholly satisfactory. The rigidity of reserves which existed under the national banking system has been eliminated by the power to discount paper at the Federal Reserve banks, while the right of these institutions to buy and sell certain securities and paper in the open market has enabled them to pump funds into and out of the market as deemed necessary in the best interests of the banking system. The policies of the Federal Reserve with regard to discounts and open market operations will be considered in the following chapter.

REFERENCES

- Anderson, B. M. "Proposed Banking Legislation," *The Chase Economic Bulletin*, April 25, 1932.
- Rodkey, R. G. *Legal Reserves in American Banking*.
- Spahr, W. F. *The Clearing and Collection of Checks*. New York: 1926.
- Watkins, L. L. *Bankers' Balances*. Chicago. 1929.
- Annual Report of the Federal Reserve Board*, 1932.

CHAPTER XXIII

DISCOUNTS AND OPEN MARKET OPERATIONS

Introduction.—The Federal Reserve Act stated in broad terms the type of paper that might be rediscounted at the Federal Reserve banks, but left to the Federal Reserve Board the task of defining and determining, within the general limits of the law, the exact nature of the paper to be considered eligible for rediscount. The Federal Reserve banks were also given rather broad powers to buy and sell securities and paper in the open market, subject to the general supervision of the Federal Reserve Board. It is through the discount and open market operations of the Reserve banks that Federal Reserve credit is expanded or contracted, and the policies surrounding these operations are hence of interest and importance. The question of discountable paper will first be considered, after which attention will be directed to the open market operations of the Federal Reserve banks.

DISCOUNTS

Eligible paper.—The term “eligible paper” is applied to any sort of paper which, under the Federal Reserve Act and the regulations and rulings of the Federal Reserve Board, may properly be presented for rediscount or discount at the Federal Reserve banks. The portion of Section 13 of the original Federal Reserve Act having to do with the discount powers of the Reserve banks read as follows :

Upon the indorsement of any of its member banks, with a waiver of demand, notice and protest by such bank, any Federal reserve bank may discount notes, drafts, and bills of exchange arising out of actual commercial transactions ; that is, notes, drafts and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used, for such purposes, the Federal Reserve Board to have the right to determine or define the character of

the paper thus eligible for discount, within the meaning of this Act. Nothing in this Act contained shall be construed to prohibit such notes, drafts, and bills of exchange, secured by staple agricultural products, or other goods, wares, or merchandise from being eligible for such discount ; but such definition shall not include notes, drafts, or bills covering merely investments or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the Government of the United States. Notes, drafts, and bills admitted to discount under the terms of this paragraph must have a maturity at the time of discount of not more than ninety days : *Provided*, That notes, drafts, and bills drawn or issued for agricultural purposes or based on livestock and having a maturity not exceeding six months may be discounted in an amount to be limited to a percentage of the capital of the Federal reserve bank, to be ascertained and fixed by the Federal Reserve Board.

Any Federal reserve bank may discount acceptances which are based on the importation or exportation of goods and which have a maturity at time of discount of not more than three months, and indorsed by at least one member bank. The amount of acceptances so discounted shall at no time exceed one-half the paid-up capital stock and surplus of the bank for which the rediscounts are made.

The aggregate of such notes and bills bearing the signature or indorsement of any one person, company, firm, or corporation rediscounted for any one bank shall at no time exceed ten per centum of the unimpaired capital and surplus of said bank ; but this restriction shall not apply to the discount of bills of exchange drawn in good faith against actually existing values.

These provisions were amended from time to time during the twenty years following the enactment of the law, but some of the alterations were of minor significance. It is necessary here only to summarize the more important changes in the law with regard to eligible paper.

The Act of September 7, 1916, authorized Federal Reserve banks to make advances to member banks on their own promissory notes for periods not exceeding fifteen days, when such notes were secured by notes, drafts, or bills of exchange of the type eligible for rediscount or purchase by the Reserve banks, or by bonds and notes of the United States. This was again amended by the Banking Act of 1933, to include certificates of indebtedness and Treasury bills of the United States, and to extend the maturity of advances secured by eligible paper to ninety days. The Federal Farm Mortgage Act of January 31, 1934, and the Home Owners' Loan Corporation Act of April 27, 1934, permitted the bonds of these

two corporations to be included, along with government obligations, as security for advances by Federal Reserve banks to their member banks, while the debentures of Federal intermediate credit banks and the bonds of the Federal land banks were likewise admitted for such security by amendatory legislation passed in 1932 and 1933.

The Agricultural Credits Act of 1923 made rather extensive changes in Section 13 of the Federal Reserve Act. It provided (1) that notes, drafts, and bills of exchange of factors, issued for the purpose of making advances exclusively to producers of staple agricultural products in their raw state, should be eligible for discount; (2) that acceptances with maturities up to six months when drawn for an agricultural purpose and secured at the time of acceptance by documents of title covering readily marketable staples might be discounted by the Reserve banks; (3) that sight and demand bills of exchange drawn to finance the domestic shipment of non-perishable, readily marketable staple agricultural products and secured by shipping documents might be discounted or purchased by the Reserve banks, but in no event were such bills to be held for more than ninety days; (4) that the maturity on agricultural paper eligible for rediscount be extended from six to nine months; (5) that the Reserve banks might discount eligible agricultural paper for Federal intermediate credit banks; and (6) that paper of co-operative marketing organizations shall be deemed to be issued or drawn for an agricultural purpose, and hence eligible for discount.

The Glass-Steagall Act of 1932 and the Emergency Banking Act of 1933 permitted the Reserve banks to make advances to member banks on the security of normally ineligible assets, and the latter permitted advances to individuals on notes secured by obligations of the United States. These were both temporary measures, but the Act of July 21, 1932, permitted the Federal Reserve banks, upon affirmative vote of five members of the Federal Reserve Board, to lend directly to individuals, partnerships, or corporations in unusual and exigent circumstances, provided that such parties could show that they were unable to obtain accommodation from other banking institutions.

The Loans to Industries Act of June 19, 1934, empowered the Federal Reserve banks, pursuant to authority granted by the Federal Reserve Board, "in exceptional circumstances when it appears . . . that an established industrial or commercial business . . . is unable to obtain requisite financial assistance on a reasonable basis from the usual sources . . . to grant loans to, or purchase the obligations of, or make commitments with respect thereto," with a maturity not in excess of five years, for the purpose of providing such business with working capital. The law further provided, however, that the aggregate amount of loans, advances, commitments, purchases or discounts of the sort noted shall not exceed the combined surplus of the Federal Reserve banks as of July 1, 1934, plus an added amount, not to exceed \$139,299,557, which might be paid in to the Reserve banks by the Secretary of the Treasury out of the profits from devaluing the dollar.

Under the Banking Act of 1935 the Board of Governors in 1937 authorized the Reserve banks to discount member bank four-month promissory notes secured by any sound assets at a rate $\frac{1}{2}$ of 1 per cent above the rate on eligible paper. Eligible assets accordingly now include any sound assets.

Regulation A of the Board of Governors.—In exercising its statutory power to define the character of paper eligible for discount at a Federal Reserve bank, the Board of Governors has issued a regulation dealing with discounts and advances. The general character of notes, drafts, and bills of exchange eligible for discount is set forth in Regulation A, Section I, Series of 1937. In this section of Regulation A, the Board has stated that a note, draft, or bill of exchange, in order to be eligible, must meet the following requirements:

(1) It must be a negotiable note, draft, or bill of exchange, bearing the endorsement of a member bank, which has been issued or drawn, or the proceeds of which have been used or are to be used, in producing, purchasing, carrying or marketing goods in one or more of the steps of the process of production, manufacture, or distribution, or in meeting current operating expenses of a commercial, agricultural or industrial business, or for the purpose of carrying or trading in direct obligations of the United States (i.e., bonds, notes, Treasury bills or certificates of indebtedness of the United States);

DISCOUNTS, OPEN MARKET OPERATIONS 477

(2) It must not be a note, draft, or bill of exchange the proceeds of which have been used or are to be used for permanent or fixed investments of any kind, such as land, buildings or machinery, or for any other fixed capital purpose;

(3) It must not be a note, draft, or bill of exchange the proceeds of which have been used or are to be used for transactions of a purely speculative character or issued or drawn for the purpose of carrying or trading in stocks, bonds or other investment securities except direct obligations of the United States (i.e., bonds, notes, Treasury bills or certificates of indebtedness of the United States);

(4) It must have a maturity at the time of discount of not exceeding ninety days, exclusive of days of grace, except that agricultural paper as defined below in this section of this regulation may have a maturity of not exceeding nine months, exclusive of days of grace; but this requirement is not applicable with respect to bills of exchange payable at sight or on demand of the kind described in subsection (b) of this section.

In addition to the above, Section I of this regulation provides for the discount by the Reserve banks of (1) sight bills of exchange drawn against the shipment or exportation of non-perishable, readily marketable staples, (2) construction loans of not more than six months' maturity (ninety days from date of discount), and (3) paper of co-operative marketing associations and factors. The regulation also provides that paper secured by ineligible assets is eligible for discount if the proceeds have been or are to be used for an eligible purpose.

It is clear from the foregoing requirements that the Federal Reserve Board has so interpreted the law as to make eligible paper practically synonymous with self-liquidating paper, with the exception, of course, of paper secured by bonds and notes of the United States. Although not definitely stated in so many words, the inference that the proceeds from the sale of goods is expected to furnish the wherewithal to repay the loan is unmistakable.

Trend of rulings.—In its rulings on specific cases which have been brought up under Regulation A, the Board has been rather consistent in requiring that paper be of the self-liquidating type in order to be eligible as far as commercial paper is concerned, but has not always insisted on the same characteristic as regards agricultural paper. Thus, for example, paper arising out of the purchase of a tractor by a farmer for his own use is deemed eligible, even though the

tractor is a capital investment which will last several years. On the other hand, notes of a corporation engaged in the business of furnishing motor transportation, made for the purpose of providing funds with which to purchase motor trucks, have been declared ineligible, even though the trucks would last no longer than the farmer's tractor.

The defense of these two apparently conflicting rulings by the Board seemed to be that the tractor was a very small part of the farmer's investment, while motor trucks constituted a very large part of the investment of the motor transportation company. To make distinctions of degree of this sort, however, frequently leads to difficulties, and it would have been better had the Board treated both of these types of paper as ineligible, using the self-liquidating nature of notes, drafts, or bills of exchange as a criterion of eligibility, whether the paper happens to be commercial, industrial, or agricultural in origin.

The Board has quite properly ruled that the security, if any, attached to a note, draft, or bill does not affect its eligibility provided that the funds obtained by the borrower have been or are to be used for an eligible purpose. Accordingly, a note might be secured by stocks and bonds or by a mortgage on real estate and still be eligible, if the borrower had used the funds for producing or marketing goods. The Board has also ruled that an unsecured promissory note accompanied by a financial statement of the borrower is presumed to be eligible if there is a satisfactory excess of quick assets over current liabilities, even if the proceeds should be used for an investment purpose. This, again, is a reasonable attitude, for if the borrower has sufficient quick assets to pay current liabilities, including his note to the bank, within the maturity of the note, the note must be considered as self-liquidating under any reasonable interpretation.

Since there is a difference of six months in the allowable maturity of commercial and agricultural paper which is eligible for discount, the Board of Governors has naturally been confronted with cases in which it had to decide whether particular notes, drafts, or bills should be classified as agricultural or commercial. A question of this sort might

arise, for example, in connection with a transaction involving agricultural products, such as a note given to a farmer in payment for grain purchased for resale, or the bill of a packing company, the proceeds of which are used for the purchase of livestock which is slaughtered for sale directly thereafter. In both of these instances, as well as others of a similar nature, the Board ruled that the paper was commercial, not agricultural, since the sale of goods, even though they be agricultural products, constitutes a commercial transaction. On the other hand, where the proceeds of the loan are used by the farmer in growing grain, or carrying it pending its orderly marketing, or for fattening cattle, draining land incidental to its cultivation, etc., the paper is to be considered as agricultural and hence entitled to a maturity at the time of rediscount of nine months.

Any exhaustive discussion of the Board's rulings on eligible paper would require far more space than is here available. These rulings cover a multitude of technical questions such as calculation of discount, liabilities of parties to a note or bill, the need for documents in the case of acceptances, and many other items. Consequently, only a few significant cases have been touched on with a view to presenting the trend of the Board's decisions in regard to the nature of paper held eligible for discount under the terms of the Federal Reserve Act and of the Board's regulations.

Regulation S, governing advances, loans, purchases and commitments by the Federal Reserve banks under the Loans to Industries Act of June 19, 1934, is largely technical and definitive, and need not concern us in the present connection.

Eligible vs. acceptable paper.—Although the Board of Governors determines the type of paper which, under the law, is eligible for discount or rediscount by the Federal Reserve banks, it is the function of the latter institutions to decide whether or not a given note, draft, or bill of exchange is acceptable. For example, a given note would fall within the classification of commercial paper eligible for rediscount if the borrower had used the funds obtained for a commercial purpose. Yet an examination of the borrower's financial statement by the credit department of the Federal Reserve

bank might indicate that the note was not satisfactory as a credit risk. In such a case, it would not be acceptable to the Federal Reserve bank and would not be discounted, even though it fell in the general class of eligible paper.

It is not necessarily true, therefore, that because a member bank has eligible paper it will be able to rediscount all of that paper at its Reserve bank should it desire to do so. Each Federal Reserve bank has the right to examine paper presented to it by a member bank for discount, and to refuse to discount any paper which it deems to be unsound or unsatisfactory. Ineligible paper is naturally not acceptable for discount, however sound it may be, but eligible paper may or may not be acceptable, depending upon whether or not the Reserve bank finds it satisfactory.

Limitations on discounting for member banks.— Except for the limitation on five-year working capital loans, purchases or commitments to financial institutions and industries under the Act of June 19, 1934, there is no specific legal limit to the amount of paper that the Federal Reserve banks may discount for member institutions. The amount of notes, drafts, and bills bearing the signature or indorsement of any one borrower is limited to ten per cent of the borrowing member bank's capital and surplus, and the Board of Governors *may* limit the amount of long-term agricultural paper which *may* be discounted by any Federal Reserve bank to a proportion of that bank's assets, but this limitation is not compulsory. The presumption is that the Reserve banks will govern their total discounts for member banks by varying their rates of discount rather than by fixing any specific limits for various member banks.

Nevertheless, the Federal Reserve banks have indirectly limited the amount of their discounts for specific member banks by adopting a policy which is opposed to continuous borrowing by member banks or to borrowing in excessive amounts. What constitutes continuous or excessive borrowing depends upon particular circumstances. To quote former Governor Harrison of the Federal Reserve Bank of New York :

There are various yardsticks ; it is just a matter of management. We are always considering and determining whether a member bank is out

DISCOUNTS, OPEN MARKET OPERATIONS 481

of line or borrowing excessively in proportion to the needs of the community. Another yardstick is the amount of the member bank's reserve with us, and still another is its capital and surplus, but I do not know any one of them that I would say is a controlling yardstick. It depends on the whole situation.

For instance, you have a community of 10 banks and because of a drought or plague or peculiarly poor business, because of the kind of business they are dealing with, those banks, all of them, need a great deal of Federal Reserve accommodation. All their borrowings go up proportionately for the same reason, which is a community reason. We would be less severe or reluctant to lend a borrower of that kind because he is not himself abusing the privileges for his own profit; in other words, he is using our privileges because the needs of the community are such that the whole banking group needs our help. But if in that same community of 10 banks some one bank gets over-ambitious and develops an investment policy of buying first-rate or second-rate bonds or even call loans, that requires its borrowing from the Reserve bank, we will usually have them come to our office and talk over the whole situation with them intending to restrain the bank, not on the ground that we do not like the particular bonds they had bought or do not like the particular customer they are dealing with, not on the ground that we do not like their making a loan on collateral but rather that their investment policy is an exaggerated one, designed solely to make a profit because of the differential between our rate and the rate on their investments.¹

On the other hand, it has always been the policy of the Reserve banks not to interfere with the business conduct of member banks unless the latter were borrowing from the Reserve banks. Even in that eventuality, the Reserve banks have refrained from attempting to dictate the manner in which the borrowing members should manage their business, except to give advice and to try to insure that the paper which had been discounted represented sound credit extension.

For a time, also, the Federal Reserve banks attempted to limit borrowing by specific institutions by the device of employing graduated discount rates. The Act of April 13, 1920, provided that the Reserve banks might fix discount rates for various classes of paper which, "subject to the approval, review and determination of the Federal Reserve Board, may be graduated or progressed on the basis of the amount of the advances and discount accommodations extended by the Federal Reserve bank to the borrowing bank." Resort to this method of discriminating among borrowing

¹ *Hearings, S. Res. 71, p. 67.*

banks, however sound it may have been, did not prove popular, and the amendment in question was repealed by the Agricultural Credits Act of 1923. Since then the Reserve banks have used moral suasion, as evidenced by Governor Harrison's testimony, in determining the distribution of discounts among member banks.

As regards the limitation of the total amount of discounts for all member banks, that is a question of credit policy to be discussed in a later connection.

Paper secured by government obligations.—When the Federal Reserve Act was originally passed, the Federal Reserve banks, as already noted, were given the authority to rediscount paper secured by bonds and notes of the United States, while the amendment of September 7, 1916, permitted them to discount for 15 days the notes of member banks secured by bonds and notes of the United States. Initially, neither of these provisions was of great significance. In 1916 the bonded debt of the United States amounted to \$1,299,000,000.² The average amount of government bonds deposited by national banks in 1916 to secure their circulating notes was about \$700,000,000. The supply of government bonds available as security for bank loans to customers or as security for member bank collateral notes was thus limited sharply.

With the entry of the United States into the Great War in 1917, however, this situation was rapidly altered. In connection with war financing, member banks bought large amounts of Liberty bonds and loaned heavily to customers on the same type of security. Consequently, during the War, government paper (paper secured by United States obligations) bulked large in the rediscounts and direct discounts of member banks of the Federal Reserve system.

In the period following the War, the amount of rediscounted paper secured by government obligations fell sharply. The member banks, however, found it convenient much of the time to borrow from the Reserve banks on their own promissory notes secured by government obligations. Thus, at the end of 1928, before the beginning of the depression, out of total bills discounted by the Reserve banks of

² Dewey, *Financial History of the United States*, p. 498.

DISCOUNTS, OPEN MARKET OPERATIONS 483

\$1,056,466,000, more than three-fifths, or \$658,242,000 consisted of member banks' collateral notes secured by obligations of the United States. In fact, many member banks, needing to borrow for a short period only, obtained advances in this manner, even though they had ample customers' paper which was eligible for rediscount.

Scarcity of eligible paper.—In the years just preceding the stock market crash of October 1929, there was considerable agitation in some quarters to expand the eligibility restrictions imposed on the Federal Reserve banks to include some types of investment paper. The reason advanced for such proposals was that a scarcity of eligible paper was rapidly developing which might easily preclude member banks from obtaining accommodation at the Reserve banks. The question of the desirability of such a change will be considered later. At present it need merely be pointed out that these proposals had very little basis for defense in any event in view of the fact that member banks might borrow on their own notes secured by government obligations. To illustrate, in June 1929, member banks held eligible assets (eligible paper plus government securities) of slightly less than \$8,000,000,000, while four years later, although eligible paper had decreased sharply in amount, eligible assets totaled over \$8,000,000,000 because of increased holding of government securities. Member bank indebtedness at the Reserve banks was roughly \$1,000,000,000 and \$100,000,000, respectively, on the two dates.

The above discussion is of purely historical significance since the Banking Act of 1935, as already noted, permitted advances to member banks secured by any sound assets. All sound assets are now eligible assets, provided a member bank is willing to pay the $\frac{1}{2}$ per cent premium on advances of this nature.

OPEN MARKET OPERATIONS

Powers of the Federal Reserve banks.—In addition to their power to discount paper for member banks, the Federal Reserve banks were given the right to buy and sell certain paper and securities in the open market, as well as to deal in gold coin and bullion and negotiate loans secured thereby.

The paper which may be purchased and sold by the Reserve banks consist of bankers' acceptances and bills of exchange of the type made eligible for discount. Open market commercial paper, although eligible for rediscount at the Reserve banks by member banks when within 90 days of maturity, is excluded from the classes of paper which the Reserve banks may buy and sell on the open market. The reason for the exclusion of such paper was doubtless the desire of the originators of the Federal Reserve Act to foster the use of trade acceptances as a substitute for the single name promissory note in trade financing in this country, not because of any inherent undesirability of open market commercial paper. The Agricultural Credits Act of 1923 also provided that the Reserve banks might deal on the open market in acceptances of Federal intermediate credit banks and of national agricultural credit corporations, whenever the Federal Reserve Board should declare that the public interest so required.

In addition to dealings in self-liquidating acceptances already noted, the original Federal Reserve Act permitted the Reserve banks to buy and sell "bonds and notes of the United States, and bills, notes, revenue bonds, and warrants with a maturity from date of purchase of not exceeding six months, issued in anticipation of taxes or in anticipation of the receipt of assured revenues by any state, county, district, political subdivision, or municipality in the continental United States, including irrigation, drainage and reclamation districts." Treasury bills and certificates of indebtedness may be interpreted to constitute notes of the United States. At least, they have regularly been dealt in by the Reserve banks since first issued, and such an interpretation certainly carries out the intent of the law in this respect. Under the Acts of January 31, 1934, and April 27, 1934, Federal Farm Mortgage Corporation bonds and bonds of the Home Owners' Loan Corporation, respectively, were made eligible for purchase and sale by the Federal Reserve banks when the maturity of such obligations does not exceed six months. The Federal Farm Loan Act also provides that Federal land bank bonds, when within six months of maturity, may be bought and sold in the open market by the Reserve banks.

Although the Federal Reserve banks are thus authorized to

buy and sell in the open market a fairly wide list of securities, the actual purchase and sale of securities other than direct obligations of the United States has, in the past, been decidedly limited. So also have dealings in trade acceptances. From the standpoint of practice, then, it is not incorrect to consider the open market operations of the Reserve banks as consisting of sales and purchases of (a) bankers' acceptances and (b) obligations of the United States government.

Distinction between operations in acceptances and securities.—The open market operations of the Federal Reserve banks in bankers' acceptances and in United States securities have had two distinct purposes. The efforts, largely successful, of the Reserve banks to build up an active acceptance market in the United States, by fixing artificially low buying rates for bankers' acceptances and standing always ready to buy eligible bills in any amount at these rates, have been described in Chapter XXI and need not be recounted here. By adopting this policy in regard to acceptances, the Reserve banks committed themselves to the purchase of substantial amounts of acceptances even at times when it might have been desirable, from the standpoint of credit control, to divest themselves of some part of their holdings of this type of paper.

In respect to open market dealings in government securities, on the other hand, the Federal Reserve banks have been subject to no such self-imposed limitations. These securities are bought and sold at will, and are hence an important tool for use in the control of credit.

Effects of open market purchases and sales.—The subject of credit control is not only vastly significant, but is exceedingly complex as well. It is consequently both necessary and desirable to postpone any discussion of the possibilities, merits and defects of the control of credit to a later point, after some of the difficult analysis of the factors determining the value of money has been presented. It is possible in the present connection, however, to trace the actual effects of open market sales and purchases on the money market and to determine what is accomplished by such transactions, without going into the question of whether or not these results are sufficient to attain the ends of the central banking authori-

ties. The following discussion will be confined to dealings in government securities, although the effects on the money market are the same whether transactions are in securities or acceptances.

It is commonly stated that purchases of securities by the Federal Reserve banks pump funds into the money market, while sales draw them out. The manner in which this is accomplished may be illustrated with a hypothetical example as follows. Suppose that the Federal Reserve Bank of New York buys Treasury notes in the amount of \$1,000,000 from a local dealer in government securities. The dealer receives payment for same in the form of a cashier's or officer's check on the Federal Reserve Bank. He deposits this check in his own bank, say the Chase National. The Chase sends the check to the Federal Reserve Bank for payment and the Reserve bank credits the reserve account of the Chase with the amount of the check.

In this transaction, both the deposits and the reserve of the Chase National Bank have been increased by \$1,000,000. The required legal reserve against this deposit amounts to $22\frac{3}{4}$ per cent, or \$223,750, leaving the Chase with \$776,250 of excess reserves, which may be loaned or invested in the money market.³ As explained in Chapter XVII, this excess reserve forms the basis of a several-fold expansion of loans and deposits in the banking system.

The sale of securities by the Reserve banks has just the opposite effect. If the Federal Reserve Bank of New York sells \$1,000,000 in Treasury notes to this same dealer, he pays for them with a check on his bank, the Chase National. The check is paid by debiting, i.e., reducing, the reserve account of the Chase with the Reserve bank, and the Chase, barring the possession by it of excess reserves, finds it necessary to contract its loans or investments or to borrow from the Reserve bank, in order to maintain its required legal reserve.

It should be clear from these illustrations that the Federal Reserve banks have the power, through their open market operations, of adding to or subtracting from the reserves of

³ The term "money market" is used in this connection in the broad sense to include the customers' loan market as well as the open markets.

member banks, which reserves are the basis of the supply of loanable funds. This, then, is the explanation of the statement that the Reserve banks pump funds into or out of the market by their purchases or sales of government securities.

Control of open market operations.—During the early years of the Federal Reserve system, the Federal Reserve Board, which had supervisory control over open market operations, allowed each Reserve bank to use its own judgment in regard to its purchases and sales in the open market. The Board did, it is true, rule on the eligibility of various types of acceptances for purchase under the terms of the Federal Reserve Act, but, in regard to government securities, each bank used its own discretion in making purchases or sales in the open market.

Under this independent mode of operation by the Reserve banks, there was always the possibility that individual Reserve bank operations might conflict with each other. It is clear that the incidence of the great bulk of open market operations is in New York, the financial center of the country. For example, the sale of a large block of securities by one of the midwestern Reserve banks would very likely be evidenced by debits to the reserve accounts of member banks in New York City for the most part, since the securities would probably be sold in the New York market, or, if not actually sold there, might be paid for with drafts on New York banks. A transaction of this sort might accordingly offset, initially at least, the efforts of the Federal Reserve Bank of New York to pump funds into the market by the purchase of securities.

After the depression of 1921, when the Reserve banks began to deal extensively in government securities, this possibility of conflict became manifest. The result was the organization of an open market investment committee of five Reserve bank governors to co-ordinate the open market sales and purchases of all of the Reserve banks. This committee was later supplanted by the open market policy conference, which, in turn, without change of personnel or function, was legalized under the title of the Federal Open Market Committee by the Banking Act of 1933, as already noted (Chapter X).

Thus, prior to 1936, open market operations, although

unified, continued under the direct jurisdiction of the Federal Reserve banks, with the sanction of the Federal Reserve Board. The Federal Open Market Committee, composed of the governors of the twelve Reserve banks, outlined the open market policy to be followed, while an executive committee of five members carried out the actual transactions. The various Reserve banks could participate in purchases at their discretion, but there was no compulsion to do so on the part of any particular bank. Since the Open Market Committee was made up of Reserve bank governors, it was usually possible for it to know, at the time a given line of action was decided upon, what the participations of the different banks would be.

Following the passage of the Banking Act of 1935, as already noted, the Federal Open Market Committee was changed to include the entire Board of Governors of the Federal Reserve System plus five Reserve bank representatives. Moreover, the newly constituted committee was given power to enforce its decisions on the various Reserve banks. Consequently, the decision as to open market operations now rests largely with the Board of Governors, the Reserve banks having no voice in the matter other than their minority representation on the Federal Open Market Committee.

FEDERAL RESERVE RATE POLICY

Provisions of the Act.—Section 14 (d) of the Federal Reserve Act provides that every Federal Reserve bank shall have the power “to establish from time to time, subject to review and determination of the Board of Governors of the Federal Reserve System, rates of discount to be charged by the Federal Reserve bank for each class of paper, which shall be fixed with a view of accommodating commerce and business.” The statement is not entirely clear, as the words “review” and “determination” are seemingly somewhat inconsistent. The word “review” appears to indicate that the Board of Governors has the right to approve, but not fix, the rate of discount established by a Federal Reserve bank. “Determination,” on the other hand, suggests the right of the Board to specify the rate to be fixed.

A reasonable interpretation of the phrase in question would

appear to be that the Board may review a rate fixed by a Reserve bank and, if it finds that rate to be unsatisfactory, may determine the rate to be substituted for it. Actually, the Board has gone even further than this. In 1927, it ordered the Federal Reserve Bank of Chicago to lower an existing discount rate in direct opposition to the judgment of the Chicago bank's board of directors.

Since 1927, consequently, the Board of Governors has been the body which decides the discount rate policy for the various Reserve banks. It is now customary, if a Federal Reserve bank wishes to make any important change in its discount rate, to obtain in advance the approval of the Board for such a change.

American and English rate policy.—One of the points made by all writers describing the discount rate policy of the Bank of England has been that the Bank of England, in ordinary times, maintains a discount rate which is above the market. The discount rate thus becomes a penalty rate, accommodation being obtainable from the Bank of England only at a rate substantially above the open market rate. This being the case, there is little resort to discounting at the Bank except in times of crisis or emergency.

Some American critics have maintained that the Federal Reserve system should follow a similar practice. The discount rate of the Federal Reserve Bank of New York has usually been above the rate on bankers' acceptances, but below the rate on open market commercial paper and still further below the rate charged on prime loans to customers. The critics in question, citing the Bank of England practice, aver that Reserve bank rates should be kept above the rates charged by member banks on prime commercial loans to customers.

Certain defenders of Federal Reserve rate policy have answered this criticism by pointing out that the Bank of England merely keeps its rate above the market rate on acceptances and that the Reserve bank rates in this country have likewise been kept above the rate prevailing in the acceptance market. This, of course, is no answer to the objection since the Reserve banks have most of the time established buying rates on acceptances below their discount rates and have thereby fixed the market rate.

As a matter of fact, in England the commercial banks do not discount paper with the Bank of England. When they need additional funds, they call their loans from the bill brokers and the latter, in order to pay off these loans, are compelled to discount their bills at the Bank of England. There is, therefore, little point in trying to draw comparisons where the conditions are so dissimilar. The real point that the critics have to make is that the Reserve bank rates have not been penalty rates since they have been below the rates charged by member banks on rediscountable paper.

Do the Reserve banks have control?—The question, then, really boils down to this: Do the Reserve banks have control of the market, or are they simply convenient credit reservoirs, furnishing funds to member banks in practically any amount?

Although it is true that the Federal Reserve banks have not been merely emergency institutions, but have rather discounted paper for member banks at practically all times, it remains a fact that the Reserve banks are in a position to have substantial control of the market. W. W. Riefler has demonstrated that there is a very close correlation between the *amount* of discounts at the Federal Reserve banks and the weighted average of three short-term open market rates during the period 1917–1928.⁴ It is also clear from the statistics presented by Riefler that, while there is a fairly close correlation between discount rates at the Reserve banks and open market rates, there is a distinct lag in the movement of discount rates behind the open market rates.⁵ The conclusion is therefore obvious that the Reserve banks have raised or lowered their rates after corresponding changes had already occurred in the rates prevailing in the open markets.

The explanation of this situation lies in the policy of the Federal Reserve banks of frowning upon continuous indebtedness on the part of member banks. Member institutions, finding themselves indebted at the Reserve banks, withdraw funds first from the open markets in order to reduce this indebtedness. The decrease in the supply of open market funds naturally causes rates in these markets to rise.

⁴ W. W. Riefler, *Money Rates and Money Markets in the United States*, pp. 23 ff.

⁵ *Ibid.*, Chart V, p. 24.

DISCOUNTS, OPEN MARKET OPERATIONS 491

It has also been shown that rates charged customers by member banks follow rate changes in the open markets.⁶ It accordingly follows that the Federal Reserve banks maintain a central control over this group of rates as well as over those prevailing in the open markets. An increase in discounts at the Reserve banks will result in an approximately simultaneous increase in open market rates, followed within a few months, by corresponding, although not usually equally extensive, changes in customers' rates at the member banks.

Relation between discounts and open market operations.—Open market operations in government securities were first extensively engaged in by the Federal Reserve banks in 1922. As a result of the depression of the preceding year, member banks had paid off a substantial portion of their indebtedness at the Reserve banks, and the latter institutions, desiring to increase their earning assets, bought substantial amounts of government securities in the open market. As holdings of government securities mounted, however, discounts decreased still further.

The Federal Reserve banks accordingly discovered that they could not substantially increase their earning assets by open market purchases, so long as member banks were indebted in any marked degree to the Reserve banks. The explanation of this is simple. It has been explained that member banks do not like to remain in debt to the Reserve banks when it is at all possible to reduce their indebtedness. It has also been shown how the purchase of open market securities by the Reserve banks pumps funds into the market by adding to the reserves of member banks. Consequently, if the Reserve banks buy government securities at a time when the member banks are in debt to them, the member banks will use the funds obtained as a result of these purchases to reduce their indebtedness at the Reserve banks.⁷

Open market operations as an instrument of control.—While the Federal Reserve banks are not able to increase their earning assets substantially by open market purchases as long as member banks are indebted to them, they are able to exert

⁶ *Ibid.*, Chart III, p. 14.

⁷ The inverse correlation between discounts and open market operations of the Reserve banks is shown graphically in Chart IV, p. 397.

a large element of control over market rates by means of their open market operations. When member banks are heavily indebted to the Reserve banks, they withdraw funds from the open markets to reduce their debt, and money rates tend to stiffen sharply. Thus the Reserve banks, by the sale of government securities, can force member banks to borrow from them and can thereby tighten the money market. On the other hand, the purchase of securities by the Reserve banks enables member banks to reduce their debt and results, consequently, in an easing of money rates.

Open market operations in government securities, if carried to extremes, may become dangerous. For example, between the end of 1929 and the spring of 1935, the Reserve banks built up their holdings of government securities from a nominal figure to the enormous sum of \$2,400,000,000. At the latter date, member banks were not only out of debt at the Reserve banks, but had excess reserves in the amount of more than \$2,000,000,000. Should the member banks start to expand their loans, investments, and deposits to the limits permitted by these excess reserves, an unsound credit situation, requiring control by the Federal Reserve banks, would doubtless develop. The Reserve banks, although in a position to withdraw these excess reserves from the market by the sale of \$2,000,000,000 of government securities, could not engage in such drastic selling operations without breaking the market for "governments" at a time when this would be most undesirable from the standpoint of the Treasury.

It is accordingly clear that open market operations in government securities, if too extensive in nature, tie up the policies of the Reserve banks with the exigencies of government finance in an undesirable fashion. It would seem, then, that the Federal Reserve banks would do better to confine their operations in the government security market within moderate limits.

Conclusion.—This chapter has been concerned with the manner in which the Federal Reserve system has added to the elasticity of the old national banking system by furnishing a reservoir of credit which could be made available to the member banks in time of need. This credit may be expanded in two ways : first, by borrowing on the part of mem-

ber banks, and, second, by open market purchases by the Reserve banks. These methods are quite different in effect, however, since borrowing is done at the initiative of the member banks and, by putting them in debt to the Reserve banks, exerts a tightening effect on the market, while open market purchases are undertaken at the initiative of the Reserve banks, permit member banks to repay indebtedness, and hence have an easing effect.

Those responsible for the original Federal Reserve Act had in mind a central banking structure which would remedy the inelasticity of the old system by permitting member banks to borrow at the Reserve banks on commercial and agricultural paper. They did not contemplate artificial control of the money market through open market operations in government securities, since the floating supply of such securities was very small. This was changed by the War, however, and, since 1922, purchases and sales of government obligations by the Reserve banks have been on an extensive scale. The desirability of this change from the standpoint of credit control will be considered in a later chapter.

REFERENCES

(See references for Chapter IX)

CHAPTER XXIV

NOTE ISSUES OF THE FEDERAL RESERVE BANKS

Introduction. — Another of the major defects of the national banking system was the inelasticity, or perverse elasticity, of the note issues of national banks. The Federal Reserve Act accordingly contained provisions designed to remedy this objectionable feature of the old system. Two distinct types of notes were provided for in this connection: Federal Reserve bank notes and Federal Reserve notes. The former, being decidedly of secondary importance, will be given brief consideration first, after which attention will be turned to the more significant Federal Reserve notes.

FEDERAL RESERVE BANK NOTES

Reason for authorization. — The Federal Reserve Act provided a plan whereby a considerable proportion of the outstanding national bank notes might be permanently retired. After two years from the time of the passage of the act and for twenty years thereafter, national banks wishing to retire their circulation were empowered to sell their bond security for such notes to the Federal Reserve banks at par and accrued interest. The Federal Reserve banks, as a group, were compelled to purchase the bonds so offered up to a maximum of \$25,000,000 per year. The Reserve banks, having purchased such bonds, were then permitted to follow either of two courses. Either they could issue Federal Reserve bank notes, secured by the purchased bonds and identical in all respects¹ with the national bank notes which had been retired, or they could exchange the two per cent gold bonds which had been purchased from the national banks for one-year three per cent gold notes of the United States to the extent of one-half of such bonds, the other half being ex-

¹ Except that there was no capital limitation on such issues by Reserve banks.

changeable for 30-year three per cent gold bonds, neither the gold notes nor the bonds so obtained to have the circulation privilege.

The intention of this section of the Federal Reserve Act was evidently to provide a means of retiring the national bank notes without undue loss to the issuing banks. The price of the two per cents was artificially inflated by the demands of the national banks requiring them for bank note security, and any blanket removal of the circulation privilege from these bonds would have resulted in a precipitate drop in their market value with consequent heavy loss to the national institutions which held them. The provision for the sale of these bonds to the Federal Reserve banks at par, and the subsequent refunding of them into three per cent government obligations was, therefore, fully justified.

For two reasons, however, the provisions of this section were unsatisfactory. In the first place, they were inadequate to accomplish the desired result. If the national banks sold bonds each year to the full \$25,000,000 authorized, the continuance of this procedure for the twenty years allowed by the act would serve to eliminate but \$500,000,000 out of a total of over \$700,000,000 of national bank notes then outstanding. In the second place, instead of requiring the exchange of all two per cents purchased by the Reserve banks for the new three per cent obligations, the act permitted the Reserve banks, at their discretion, to issue exactly the same type of notes which it was proposed to eliminate.

Practical significance.—As a practical matter the retirement of national bank notes under these provisions of the Federal Reserve Act has been of no consequence. Only a few millions of Federal Reserve bank notes were ever issued for this purpose. When the United States entered the Great War, the intense demand for hand-to-hand money made it seem advisable to the national banks to retain their circulation, and national bank note issues remained outstanding in the amount of between \$700,000,000 and \$800,000,000 up to the beginning of the depression. The bonds securing national bank note circulation became callable in 1930, but, at the desire of the national banks, they were not called at that time.

The Federal Home Loan Bank Act of July 22, 1932, provided that for a period of three years from the date of enactment of that act national banks might issue notes secured by all outstanding bonds of the United States bearing interest at a rate not exceeding $3\frac{3}{8}$ per cent per annum. Under this provision, the national banks expanded their note issues by about \$300,000,000 in the two years following.

The question of the retirement of national bank notes was finally settled in the spring of 1935 without any reference to Federal Reserve bank notes. On March 10, 1935, Secretary of the Treasury Morgenthau disclosed the intention of the Administration to use the devaluation profits not allocated to the stabilization fund to retire, the following summer, \$675,000,000 of 2 per cent consols and Panama Canal bonds of 1936 and 1938, which would thereby force the retirement of a like amount of national bank notes. Since the special note issue privilege under the Home Loan Bank Act also expired in the summer of 1935, the security available for national bank note issues would be entirely withdrawn.

Although Federal Reserve bank notes have not been used to any appreciable extent for the purpose for which they were intended, they have been issued in substantial amounts in two other connections. This type of note, secured by Pittman certificates of indebtedness, was used as a substitute for silver certificates for a few years under the operation of the Pittman Act of 1918. They were subsequently all retired by the Federal Reserve banks, only to be brought to life again under the Emergency Banking Act of 1933.² By Dec. 31, 1940, these special issues had likewise been retired as far as the Federal Reserve banks were concerned, although approximately \$21,000,000 in such notes remained in circulation at that time.

FEDERAL RESERVE NOTES

Introduction. — Federal Reserve notes were provided for in the Federal Reserve Act in order to furnish an elastic element in the bank note currency of the country. Specifically,

² For details of the issuance of Federal Reserve bank notes under this act, see Chapter X.

the Act states (Section 16) that "Federal Reserve notes, to be issued at the discretion of the Board of Governors of the Federal Reserve System for the purpose of making advances to Federal Reserve banks through the Federal Reserve agents . . . and for no other purpose, are hereby authorized. . . The Board shall have the right, acting through the Federal Reserve agent, to grant in whole or in part, or to reject entirely the application of any Federal Reserve bank for Federal Reserve notes ; but to the extent that such application may be granted the Board of Governors . . . shall, through its local Federal Reserve agent, supply Federal Reserve notes to the banks so applying, and such bank shall be charged with the amount of notes issued to it and shall pay such rate of interest as may be established by the Board of Governors . . . on only that amount of notes which equals the total amount of its outstanding Federal Reserve notes less the amount of gold or gold certificates held by the Federal Reserve agent as collateral security."

As is clear from the foregoing provisions, the Board of Governors is given complete control over the issuance of Federal Reserve notes. It may refuse to grant the application in whole or in part of any Federal Reserve agent for notes and may charge interest on notes not secured by gold.

As a matter of practice, the Board of Governors has never exerted these powers. Applications for notes from the Federal Reserve agents have regularly been granted in full so long as the collateral was adequate and eligible under the terms of the Act. This negative attitude has quite properly been adopted on the ground that in a country such as the United States, with a highly developed check system, the control of credit expansion should be centered on the check currency rather than on bank note issues. Improper expansion of bank credit appears first in the check currency, to be followed by an increased demand for bank notes. To refuse to issue such notes would put a stop to the expansion, but only at the cost of throwing the whole system into utter confusion. The Board has accordingly centered its efforts to control credit on checking deposits and has granted all proper applications for notes from Federal Reserve agents.

With this introductory statement regarding the attitude of the Board of Governors toward its powers over the issuance of Federal Reserve notes, we may consider such notes from the standpoints of parity, security and elasticity.

Parity.—Federal Reserve notes are entirely satisfactory as regards parity. They are the obligations of the issuing banks and of the United States government, and are “receivable by all national and member banks and Federal Reserve banks and for all taxes, customs, and other public dues. They shall be redeemed in lawful money on demand at the Treasury . . . , or at any Federal Reserve bank.” The above provisions of the Federal Reserve Act are ample to secure the maintenance of parity between Federal Reserve notes and standard money. Being redeemable at the Treasury or at any Federal Reserve bank, there are thirteen redemption agencies in all, located in thirteen important centers throughout the entire country. In addition, the fact that these notes are obligations of the United States and have been used in all payments since 1933 as valid tender makes it certain that they will not fail to be maintained at par.

Security.—Quoting again from the act :⁸ “Any Federal Reserve bank may make application to the local Federal Reserve agent for such amount of the Federal Reserve notes hereinbefore provided for as it may require. Such application shall be accompanied with a tender to the local Federal Reserve agent of collateral in amount equal to the sum of the Federal Reserve notes thus applied for and issued pursuant to such application. The collateral security thus offered shall be notes, drafts, bills of exchange, or acceptances acquired under the provisions of section thirteen of this act, or bills of exchange indorsed by a member bank of any Federal Reserve district and purchased under the provisions of section fourteen of this act, or bankers’ acceptances . . . or gold certificates ; but in no event shall such collateral security, whether gold certificates, or eligible paper, be less than the amount of Federal Reserve notes applied for.” This is

⁸ Under the Glass-Steagall Act, as noted earlier, United States bonds and other Treasury obligations may be used as security for Federal Reserve notes, if necessary, until June 30, 1941.

usually summed up more succinctly by stating that the required security consists of commercial paper or gold to the full amount of the notes issued. Federal Reserve notes, being the obligations of the United States, are guaranteed notes; and it is this guarantee which, as in the case of national bank notes, constitutes the real security to the individual noteholder. As such, it is of unquestioned soundness. The commercial paper or gold then acts as security to the government in case of failure of a Federal Reserve bank and, in addition, the notes constitute a first and paramount lien on all the assets of the issuing bank, so that the government is amply protected.

Elasticity.—From the standpoint of parity and of security to the individual noteholder, Federal Reserve notes are neither much better nor much worse than national bank notes or Federal Reserve bank notes. As regards elasticity, however, these notes are decidedly superior to the two types of bond-secured issues. We shall therefore discuss this characteristic of Federal Reserve notes in some detail.

Expansibility.—Ability to expand note issues depends upon the type of the collateral required and the size of the reserve which must be, or as a matter of practice is, maintained for the redemption of such issues. The collateral behind Federal Reserve notes *may* be commercial paper, and, as already explained, such collateral expands with the business need for additional notes, so that there is no danger that the available collateral will ever prove inadequate as was sometimes the case with the national bank notes.⁴ As for reserves, the Federal Reserve banks are required to maintain reserves equal to 40 per cent of the Federal Reserve notes in circulation. This means that expansion is thereby limited to two and one-half times the amount of gold available for note reserves. This gives a possibility of expansion which is quite adequate to meet any normally recurring demands of business for additional hand-to-hand currency. In order to provide for the redemption of the notes in Wash-

⁴ This statement does not hold good for times of severe depression, such as 1931-32, when loss of confidence in the banks causes depositors to withdraw their funds from the banks in hand-to-hand money for purposes of hoarding. In such circumstances many banks may be inadequately supplied with eligible paper. It was conditions of this sort which gave rise to the passage of the Glass-Steagall Act, previously noted.

ington, a portion of this 40 per cent reserve is kept in the Treasury as a redemption fund, but this in no way interferes with the degree of expansibility already mentioned.

Contractibility. — The Federal Reserve Act also includes provisions which are intended to bring about the contraction of Federal Reserve note issues after the need for them has passed. The notes, although demand liabilities of the Reserve banks and fundamentally the same in nature as their deposits, cannot be counted by *member banks* as part of their legal, or required, reserves, the law requiring all the legal reserves of member banks to be in the form of deposits with the Reserve banks. Thus the member banks, having received Federal Reserve notes on deposit from their customers, will be inclined to send them in to the district Reserve bank for credit to their reserve accounts. Even if their reserve accounts are sufficiently large, it is probable that the member banks find it desirable to send the notes to the Reserve banks for credit, since the latter institutions pay all expenses connected with such shipments of notes, while if a member bank wished to send some of its surplus funds to a correspondent bank in New York, say, to be loaned out in the call loan market, it would have to pay the shipping expenses if notes were used for this purpose. And, even aside from the expense of shipping the notes, it is much more convenient for a member bank to write a check against its reserve account and mail that to its New York correspondent (or transfer the desired amount of funds by wire) and send the notes in to the district Reserve bank, which is usually nearer and more convenient to ship to. If bonds or other securities are purchased with surplus funds, the same line of reasoning prevails. It is more convenient to pay for such purchases with drafts than to try to use Federal Reserve notes for that purpose.

But there is another motive, and a more powerful one, which impels the member banks to send Federal Reserve notes in to the Reserve bank, and that is *the desire on their part to extinguish their indebtedness at the reserve institution*. When a member bank wishes to obtain Federal Reserve notes, it normally rediscounts some of its commercial paper with the Reserve bank and takes the proceeds of the loan in the form of such notes. This is almost certain to be the case in periods

of business prosperity or seasonal activity when Federal Reserve note issues are expanding fairly rapidly. The member bank in this way incurs a debt at the Reserve bank upon which it must pay interest, and it is decidedly profitable to the member bank to retire this indebtedness as soon as it obtains idle funds which may be used for this purpose. Therefore, when a period of expansion has passed, the Federal Reserve notes begin to accumulate in the hands of the member banks, and these institutions will send in all such surplus notes to the Reserve bank to pay off their obligations and relieve themselves of the attendant interest burden.

It should now be clear that it is to the interest of member banks to send surplus notes in to the Reserve banks for credit. But there are twelve Reserve institutions and some of the notes which any one Reserve bank will receive from its members will be the notes of one or more of the other eleven district banks. In order to make sure that notes of other Reserve banks will be sent back to the issuing bank for redemption, and so not circulate indefinitely in a district far removed from that in which the note was issued, the Federal Reserve Act provides that a 10 per cent tax be levied against any Reserve bank on any such notes of another Reserve institution as it may pay out over its counter. Further, no Reserve bank is allowed to count the notes of another Reserve bank as part of its legal reserves, so that there is no question but that all Federal Reserve notes of other banks received by a given Reserve bank will immediately be sent back to the original or issuing banks for redemption.

Alteration in issue requirements.—At the time of the passage of the Federal Reserve Act, it was intended that Federal Reserve notes should be a purely elastic type of currency based on commercial paper as security. Consequently, the original act provided that commercial paper only might be used as collateral for Federal Reserve notes, and that the issuing bank should, in addition, keep a 40 per cent gold reserve in its own vaults. As a result of the desire to concentrate gold in the vaults of the Federal Reserve banks during the War period, an amendment to the act, in 1917, provided that gold, as well as commercial paper, might be used as collateral for such note issues, and that any gold so

used as collateral might be counted as part of the 40 per cent required gold reserve. This meant that Federal Reserve notes might be issued against 100 per cent of gold collateral, in which case they would become practically gold certificates and merely displace that amount of standard money, thus losing the quality of elasticity.

As the amendment of 1917 has actually worked out, a portion (sometimes practically all) of the outstanding Federal Reserve notes have been backed by gold as collateral and so have not had the elastic quality originally intended. This does not mean, however, that the elasticity of Federal Reserve note issues as a whole has been destroyed. An illustration will perhaps best clear up this point. A member bank in a given district deposits, let us say, \$100,000 in gold with the Reserve bank of its district and receives in exchange \$100,000 of Federal Reserve notes, which it puts into circulation as its customers demand hand-to-hand money or holds in its vaults as till money.⁵ The Reserve bank deposits this full \$100,000 in gold with the local Federal Reserve agent (who issues the notes to the Reserve bank upon receipt of the required collateral) as collateral for the Federal Reserve notes. These notes are virtually gold certificates, and the Reserve bank is required to keep no additional gold reserve against them. They may stay in circulation indefinitely as part of the permanent circulating medium of the country as far as the motive for retiring them is concerned, since they have been obtained in exchange for gold and not by borrowing at the Reserve bank. Suppose now, however, that other member banks of the district find themselves in need of more hand-to-hand money, and so rediscount commercial paper with the Reserve bank to the extent of \$150,000 and take the proceeds in the form of Federal Reserve notes. The Reserve bank can now turn over to the Federal Reserve agent the \$150,000 of commercial paper as collateral security for that amount of notes which will be paid out to the borrowing member banks. The total of notes in circulation will then be \$250,000, secured by \$100,000 (or 40 per cent) of gold and \$150,000 (or 60 per cent) of commer-

⁵ This was a common procedure in the period following the passage of the amendment in 1917.

cial paper. The latter \$150,000 of notes was obtained by borrowing on the part of member banks and is subject to all the forces making for contraction which have been mentioned.

Federal Reserve note issues, then, may be said to be made up of two sections or groups: that secured by gold which is inelastic and forms a part of the permanent circulation, and that secured by commercial paper which is elastic and forms the temporary part of our bank note currency, i.e., that part which has resulted from temporary demands to meet seasonal or other business needs for hand-to-hand money. It goes without saying that it is quite impossible to distinguish any one Federal Reserve note from another as regards the security behind it. Nevertheless, as long as some commercial paper is kept with the Federal Reserve agent as security for Federal Reserve notes, it remains true that a portion of these notes equal to the commercial paper so held may be considered as having the quality of elasticity, while the remaining portion—equal to the gold security—is not elastic.

Emergency elasticity.—Since the quality of elasticity is present, or may be present, in at least a part of the Federal Reserve note issues, these notes may be said to fulfill satisfactorily the third requirement of a good system of note issue as far as ordinary elasticity is concerned. The Federal Reserve Act also makes provision for emergency elasticity. The Board of Governors is given the authority to suspend any reserve requirement of the act for certain specified periods if it is deemed necessary, provided that if the reserve against Federal Reserve notes falls below 40 per cent, a graduated tax—to increase with the size of the deficiency—be levied against the deficiency below this figure. This is avowedly an emergency measure. The Board of Governors has the power to allow practically any degree of expansion which conditions may demand, while the graduated tax makes such expansion increasingly unprofitable and assures a rapid contraction of note issues as soon as the emergency has passed.

Monetary elasticity and the Federal Reserve system.—Before leaving the subject of bank notes, some qualification of the discussion of the preceding section is necessary lest it

be inferred that Federal Reserve notes furnish the only elastic element in the country's hand-to-hand currency. As a matter of fact, such is far from being the case, as we shall attempt to show. In discussing the elasticity of Federal Reserve notes, it was assumed that such notes were paid out to member banks whenever the latter borrowed at the Reserve banks to obtain hand-to-hand money. Suppose, however, that the Reserve banks, instead of meeting the demand for hand-to-hand money on the part of members with Federal Reserve notes, pay out United States notes or silver certificates to the member banks when the latter rediscount to obtain hand-to-hand money. There would be just as much incentive to the member banks to pay back these loans as though they had received Federal Reserve notes from the Reserve bank instead of other forms of lawful money. Consequently, as the greenbacks or silver certificates accumulate in the hands of member banks, after the need for them in circulation has passed, these institutions will send them in to the Reserve banks to decrease their indebtedness in exactly the same fashion that they would send in Federal Reserve notes under the conditions depicted in the preceding section.

As a matter of fact, in certain years in the twenties when gold was still permitted in circulation, the Federal Reserve banks followed the policy of paying out gold certificates to meet the demands of their members for hand-to-hand money. More recently, at times, silver certificates and United States notes have been put into circulation in this fashion. The result has been that lawful money in circulation has attained a degree of elasticity which closely approaches that of any asset-secured bank note issue. What has happened is that the Federal Reserve banks have become depositories for practically all of the surplus hand-to-hand money of the country, so that when more money is needed to meet business needs, it must be obtained as a rule from the Reserve banks by way of loan.⁶ The resulting interest charges make it profitable for member banks to use *any* surplus hand-to-hand money which may accumulate in their vaults to pay off some of their in-

⁶ Since 1933, because of their large excess reserves, member banks have not had to borrow at the Reserve banks to obtain hand-to-hand money for seasonal needs. They have simply drawn down their balances at the Reserve banks and then built them up again when the need for hand-to-hand money was past.

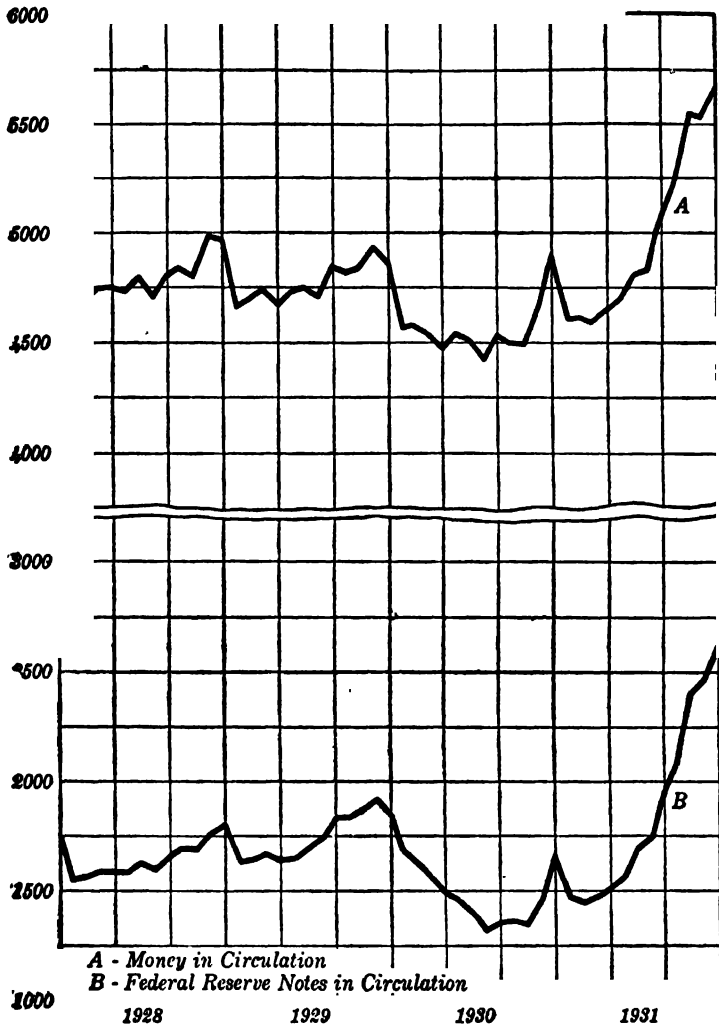
Millions of Dollars

CHART XV. FEDERAL RESERVE NOTES IN CIRCULATION AND MONEY IN CIRCULATION IN THE UNITED STATES, 1928-1931

debtedness at the Reserve banks and, incidentally, reduce the amount of hand-to-hand money in actual circulation. The effect of these factors has been to impart a fairly high degree of elasticity to all forms of hand-to-hand money, as shown in Chart XV. Disregarding, for the moment, the year 1931, it will be seen from the chart that the upper curve, *money in*

circulation, shows a more regular and pronounced seasonal movement than does the lower curve, which represents the amount of *Federal Reserve notes in circulation*. Moreover, during most of the three years, 1928–1931, as well as the preceding five years, a large proportion of the Federal Reserve notes in circulation was secured by gold rather than eligible paper. This seems to demonstrate fairly conclusively that, from 1923 to 1930, an elastic system of note issue was not essential to monetary elasticity in the United States.

The utility of Federal Reserve notes.— It is not possible to appraise the utility of Federal Reserve note issues from the situation prevailing between 1923 and 1930, during which time an elastic type of note issue did not appear to be necessary. It happens that the conditions resulting from the Great War brought about a large increase in the gold stock of the United States, much of which found its way into the vaults of the Federal Reserve banks. So long as the Reserve banks have a large surplus of gold above their legal reserve requirements, it is possible to meet demands for hand-to-hand money by paying out gold certificates or Federal Reserve notes secured largely by gold; but, in the event of a heavy export of gold to other countries, this policy would have to be abandoned. It is in the latter circumstances that the real utility of Federal Reserve notes becomes evident.

An excellent illustration of the value of an elastic bank note issue is to be found in the events of the closing months of 1931 in the United States. From the spring of 1931 on, the amount of money in circulation (i.e., the amount of money outside the Reserve banks and Treasury) increased unseasonally as a result partly of an increase in hoarding, which resulted from a loss of confidence in the banks of many sections, and partly of an increased need for hand-to-hand money in those sections which had lost their banking facilities through bank failures. Nevertheless, up to the close of August 1931, the increased issues of Federal Reserve notes, as shown in Chart XV, were not secured by eligible paper to any large extent. In fact, on August 31, the amount of gold held by Federal Reserve agents as collateral for notes constituted 92 per cent of total notes issued to the Reserve banks

and almost 110 per cent of Federal Reserve notes in actual circulation.⁷

On September 21, 1931, England departed from the gold standard, following severe financial crises in Austria and Germany during the summer. The immediate effect of England's action was the withdrawal of balances from the United States by France and other European powers. In some six weeks' time, the gold stock of the United States was reduced by slightly over \$700,000,000. Simultaneously, the domestic demand for hand-to-hand money increased by about \$400,000,000. This double strain was met, in large part, by an increase in member bank discounts (September 23–October 28) at the Reserve banks of \$407,000,000 and an increase in bills bought in the open market by the Reserve banks of \$482,000,000.

Without going further into detail, it may be noted that the amount of "free gold" in the Federal Reserve banks, i.e., gold not held as collateral for Federal Reserve notes and in excess of the required reserve against deposits, actually increased slightly during the six weeks in question. This was possible because eligible paper, represented by the increases in bills bought and bills discounted by the Reserve banks, was substituted for gold as security for Federal Reserve notes. Thus, at the end of October 1931, gold held as collateral against Federal Reserve notes amounted to but 56.6 per cent of total notes issued and to 64 per cent of notes in actual circulation.⁸

The utility of Federal Reserve note issues, it should now be clear, lies in the ability either to expand these issues to two and one-half times the amount of gold available as security, or to meet demands for gold for export without contracting the domestic circulation, by substituting eligible paper for gold as security for such issues.⁹

The question of elasticity again.—We have seen that Federal Reserve notes have the qualities of expansibility and

⁷ *Federal Reserve Bulletin*, September 1931, p. 540.

⁸ *Federal Reserve Bulletin*, November 1931, p. 648. See also pp. 603-604 of this issue for an analysis of the gold and currency movements outlined above.

⁹ The Glass-Steagall Act, already referred to, was designed to permit this type of substitution to continue during an emergency period when a lack of eligible paper might otherwise have interfered with the process.

contractibility in a marked degree, and hence may be said to meet the requirement of elasticity in satisfactory fashion. Moreover, it has been shown that the 1917 amendment, although permitting gold to be used as security for Federal Reserve notes, did not destroy their elasticity. It has been claimed, however, that the eligible paper security which has been used for Federal Reserve notes has not consisted of agricultural and commercial paper to any large degree, but of paper secured by government obligations. To the extent that this is the case, it is maintained, Federal Reserve notes are merely bond secured notes, not greatly different from the old national bank notes.

The Federal Reserve note accounts published by the Board of Governors do not distinguish eligible paper secured by government obligations from eligible commercial and agricultural paper. It has been the practice of the Reserve banks, however, to turn a large part of their discounted paper and bills over to their Federal Reserve agents as security for Federal Reserve notes. We may therefore assume, without great danger of error, that the distribution of paper held as security for Federal Reserve notes is not greatly different from that of total bills discounted and bought by the Federal Reserve banks.

On this basis, in a typical post-war year, out of total bills discounted of \$1,056,466,000 on December 31, 1928, \$658,242,000, or more than half, consisted of member banks' collateral notes secured by government obligations. This would seem to give weight to the objection referred to. But it must be remembered that the wide use by member banks of collateral notes secured by government obligations has been largely a matter of convenience, many of these member banks having eligible commercial paper in their possession. So long as this is the case, it is largely a matter of indifference whether the notes are secured by commercial and agricultural paper or by bond secured paper.

At the end of October 1931, eligible paper in the amount of \$1,348,626,000 was held as security for Federal Reserve notes. Of this amount, \$1,000,000,000, approximately, consisted of agricultural and commercial paper and bankers' acceptances. After the passage of the Glass-Steagall Act in

1932, however, the Reserve banks made use of government obligations purchased in the open market as security for Federal Reserve notes to a considerable extent, but this was considered as an emergency practice only and, as such, it was unobjectionable.

On the whole, it may be concluded that the intent of the framers of the Federal Reserve Act to provide for an elastic currency based on the commercial and agricultural needs of the country has been satisfactorily attained under the actual operation of the law. Certainly Federal Reserve note issues have exhibited none of the old, objectionable inelasticity of national bank note issues. The real advantage of permitting self-liquidating paper *only* to be used as security for Federal Reserve notes would be the certainty that issues of notes could not then exceed the agricultural and commercial needs of the country. When bond secured paper can be used as collateral, there is always the possibility that note issues may become excessive. In any event, as noted at the beginning of the chapter, the control of credit expansion should be centered on the check currency. If such expansion is properly regulated, any security may be used without danger as collateral for Federal Reserve note issues.

Federal Reserve notes since 1933.—After the banking crisis of 1933, a number of factors combined to increase the relative importance of Federal Reserve notes in the monetary system of the United States. The withdrawal of gold and gold certificates from circulation, begun in 1933, and the retirement of national bank notes, begun in 1935, necessitated the substitution of some other form of hand-to-hand money for these two types. The substitution was made in part with silver certificates and in part with Federal Reserve notes. Thus at the close of 1940 Federal Reserve notes comprised some 64 per cent of the total money in circulation as compared with about 34 per cent at the close of 1930. Since silver certificates in circulation have shown an almost uninterrupted increase since 1934, Federal Reserve notes have been the really elastic element in our hand-to-hand currency during the past several years. This elasticity, however, has not been due to the use of eligible paper as security for Federal Reserve notes. As indicated in footnote 6, the member banks have

had large excess reserves and have not had to borrow to procure Federal Reserve notes. But the Reserve banks have had large gold certificate reserves and have used these as security for their note issues. Thus, at the close of 1940, the Federal Reserve agents held \$6,379,500,000 of gold certificates against \$6,256,650,000 of notes outstanding. Of the latter, the amount in circulation was \$5,930,997,000, so that the amount of gold certificates held by agents was considerably in excess of the total of notes outstanding or in actual circulation. Under the circumstances, Federal Reserve notes are little more than gold certificates. If they were abolished and if gold certificates were allowed to circulate, we should find the same elasticity pertaining to the latter that we now find with respect to Federal Reserve notes.

Conclusion. — In this and the preceding chapters we have traced the course of American monetary and banking development from the early days of the country to the present time, and we have also considered certain phases of Federal Reserve operation and policy which have remedied or alleviated the major difficulties encountered under the national banking system. The technical aspects of monetary standards and of the commercial banking process have also received attention.

Other important monetary and banking problems still to be considered have to do with central bank reserves, central bank cooperation, the relation of monetary and credit policy to the business cycle, the control of credit by the Federal Reserve authorities, and the problem of the standard of value best suited to present-day conditions. Before these matters can be properly understood, however, it will be necessary to analyze the forces and factors which enter into the determination of the value of money, since most of the problems referred to are closely connected with the latter subject. In the five chapters which follow, therefore, we shall be concerned with various aspects of the value of money. We shall then be in a position to consider those intricate and important monetary and credit problems, the correct solution of which is highly significant to the welfare of this and other countries.

REFERENCES

- Burgess, W. R. *The Reserve Banks and the Money Market.*
Kemmerer, E. W. *The A B C of the Federal Reserve System.*
Willis, H. P. and Steiner, W. H. *Federal Reserve Banking Practice.*

PART IV
THE VALUE OF MONEY

CHAPTER XXV

THE MEANING AND MEASUREMENT OF THE VALUE OF MONEY

Introduction.—In earlier chapters it has been remarked from time to time that certain of the more complex problems of banking, particularly central banking, require for their understanding a knowledge of the forces and factors which determine the value of money. Having discussed the technique of banking and the development of the American banking system, we are ready to return to the subject of money and to undertake an analysis of the principles which show how the value of money is determined. Before proceeding on this basis, however, it is necessary to indicate just what is meant by the value of money, and to show how this value—or, rather, changes in it—may be measured. The present chapter will accordingly be devoted to these aspects of the subject.

THE MEANING OF THE VALUE OF MONEY

A definition of the value of money.—The value of money may be defined as its *power or ability to command goods and services in exchange*. The same definition of the value of any economic good would hold in our present exchanging order, but a certain difficulty arises in connection with the measurement of the value, or changes in the value, of money which do not exist in the case of other economic goods. The difficulty arises from the fact that the values of all other economic goods are expressed in terms of money. Naturally, then, money cannot be used to express or measure its own value, for such a procedure would be meaningless. To say that wheat is worth a dollar a bushel at a given time would clearly indicate the value of wheat as compared with either the value of various other economic goods or that of wheat itself upon some other occasion. To say that a dollar is

worth a dollar at a given time discloses nothing either as to the value of the dollar compared with the values of other goods, or as to the value of the dollar on that day compared with its value at some earlier date. This is bound to be the case because the government has, by law, ruled that a fixed amount of fine gold shall constitute a dollar at all times. In other words, the government has fixed the *price* of gold, so that it is quite impossible for the price of a dollar to change, although its *value* may vary considerably from time to time.

Since the price of the gold in the dollar has been fixed, how are we going to tell what its value is, and whether or not it changes from time to time or remains relatively stable? Referring again to the price of wheat which is, say, one dollar per bushel, we might say that a dollar was worth a bushel of wheat, but, if we did so, and the price of wheat then rose to two dollars a bushel, we should be forced to say that a dollar was worth only one-half of a bushel of wheat. This would be correct as applied to wheat only, but during the interval in which the price of wheat had risen from one to two dollars, it would almost certainly be the case that some other commodity—say cotton—had fallen in price from 15 cents to, perhaps, 10 cents per pound. We should then find ourselves in the predicament of dealing with a dollar which, during a given interval, had risen in value with respect to cotton and had fallen in value with respect to wheat. It is quite clear, of course, that if the concept of value as attaching to the dollar is to have any real significance, the value of the dollar could not possibly rise and fall at the same time. As a matter of fact, in the illustration chosen, the change in the prices of wheat and cotton probably represented changes in the real economic values of these two commodities in large part and little, if any, change in the value of the dollar.

Money represents *generalized purchasing power*, and changes in its value can be indicated only by changes in its ability to command goods in general in exchange, and not by its ability to command varying amounts of any particular good or group of goods. If the prices of a wide variety of goods and services are tabulated at the beginning of a certain period and again at the end, it will be found invariably that some prices have moved upward, some downward, and some,

probably, have not changed at all. If it is found that the prices which have advanced are those of widely used and important goods, and that the number of price advances is greater than the number of declines, we may be safe in assuming that the value of money has declined, since each dollar is capable of purchasing a smaller quantity of goods in general than at the beginning of the period. In other words, if the average of all these prices has advanced, we might be justified in saying that the value of money has fallen.

Relative and absolute changes in the value of money. —

But even this idea of changes in the value of money is not entirely satisfactory. A situation might easily be conceived in which the productivity of a given country is on the decrease, so that there is more or less of a growing scarcity of goods. If the money stock of the country in question remained unchanged (relatively to population) during such a period of decreasing productivity, prices would naturally tend to rise all along the line, with the result that the general run or level of prices would be higher at the end of the period than at the beginning. Would it then be proper to say that the value of money had fallen? Or has the value of money remained the same, absolutely, while the values of economic goods in general have increased? The author is inclined to answer the first of these questions in the negative and the latter in the affirmative, on the ground that the basis for the change in the price level lay entirely with the changes which had occurred in the economic values of a wide range of goods, and not at all with any change in the value of money itself. Stated somewhat differently, the upward trend of prices is necessary to represent the changes which have occurred in the values of goods—changes which have unquestionably taken place—and, therefore, such a trend of prices is necessary to depict the real economic situation. This attitude will be objected to strongly by those who assert that money has no absolute value apart from its value in exchange. The value of an economic good, however, is not merely relative to that of other economic goods. This can be shown by supposing a situation in which but one economic good exists. If this good satisfies a want and is scarce, it

will have economic value despite the fact that there is no other good in terms of which its value can be measured. Similar reasoning might be applied to the value of money, considered in an absolute sense. That is, we might quite reasonably say that if the quantity of money is kept stable in relation to population, the value of the money unit would remain stable and changes in the price level, or average of prices of goods and services, would indicate changes in the values of those goods and services, not in the value of money.

The value of money considered as its exchange value in this book.—In spite of the considerations brought out in the preceding paragraph, it will be noted that the value of money was defined as its ability to command other goods and services in exchange. The justification of this definition lies in the fact that in the practical application of some system of measurement of changes in the value of money, it is impossible to draw any distinction between changes in purchasing power which arise from alterations in the values of goods and those which arise from real changes in the value of money. Practically, the purchasing power of the dollar—its command over economic goods in general—rises, falls, or remains stationary, regardless of the forces which have brought about these results. It therefore seems expedient to recognize all changes in purchasing power as changes in the value of money. At the same time, it will not do to forget the fact that such changes may result from forces which are brought about by variations in the general productivity of the country as well as from forces which originate entirely on the money side. If we are to take an intelligent attitude on money affairs, it is certainly as important to know *why* a given change has occurred as to know what the extent of that change has amounted to. One subtle theorist¹ has termed the changes in the general purchasing power of money which result from changes in productivity *relative* changes in the value of money, while those resulting from conditions affecting the money itself are termed *absolute* value changes; and this is a distinction which it will be well to bear in mind.

¹ Taylor, *Some Chapters on Money*, Chapter VI.

THE MEASUREMENT OF CHANGES IN THE VALUE OF MONEY

Price index numbers.—Since, for practical purposes, we shall consider all changes in the purchasing power of money, whether relative or absolute, as changes in its value, it is pertinent to inquire how these variations are to be measured. The answer is by means of index numbers of the general level of prices. Any detailed discussion of the mechanics of index number construction is outside the scope of this work. However, some general observations on the nature and application of price indexes seem desirable in the present connection.

*Price index numbers are series of abstract numbers which express the relative changes in the magnitude of statistical averages or aggregates of prices.*² To explain more fully, if we take a statistical average—such as the arithmetic mean, geometric mean or median—of a group of prices in a given year and call that the base, usually designating it as 100, and then obtain a similar average of prices of the same items for a later date, we can determine the relative change in that average of prices at the later date as compared with the base period. Or we may add the prices together and term the sum 100 for the base year and compare it with the aggregate or sum of the prices of the same commodities at a later (or earlier) date.

When an average, such as the arithmetic mean, is used, it is common practice to set each price in the base year equal to 100 and then obtain the relative increase or decrease in each price for the date for which the index number is being computed. These relatives are then averaged to obtain the index number for the latter date, as shown in the very simple example below:

(1)	(2)	(3)	(4)	(5)	(6)
Commodity	Unit	Price 1910	Relative 1910	Price 1911	Relative 1911
Corn	bu. \$	.480	100	\$.618	129
Cotton	lb.	.141	100	.088	62.5
Hay	ton	12.140	100	14.290	117.5
Wheat	bu.	.883	100	.874	99
			4)400		4)408
			100		102

² This definition is adapted from a general definition of index numbers as given by A. A. Young in a *Handbook of Mathematical Statistics* (Boston, 1924), p. 181.

On the other hand, if an aggregate of prices is used, the prices of corn, cotton, hay and wheat in 1910 are added together, the sum being \$13,644. The sum of the 1911 prices is \$15,870. Setting the 1910 aggregate equal to 100, the index number for 1911 is found to be 116 ($\$13,644 : \$15,870 :: 100 : 116$).

Both the index numbers illustrated above are unweighted ; that is, all commodities are treated as of the same importance. Also, in the case of the unweighted aggregate of actual prices the variety of units used—bushels, pounds and tons—distorts the result. This objection could be overcome by reducing all units to pounds, but, even then, the diversity in importance of the commodities included leads to unsatisfactory results. In order to remedy this drawback, it is necessary to introduce weights in the calculation of a satisfactory price index number.

Weighted price indexes.—In illustrating the nature of weighted price index numbers, a single example will suffice. As a matter of practice, the important price indexes, from the point of view of the measurement of the value of money, are weighted indexes of price aggregates. Consequently, an example of the weighted aggregate of actual prices will be sufficient for our purposes. The weights ordinarily used consist of the amounts of the various goods produced, or marketed, in the base, or some later, period. Using the same commodities and prices as in the previous example, but introducing as weights the quantities produced in the base year (1910), the index number of our four farm commodity prices would be calculated as follows :

(1) <i>Com- modity</i>	(2) <i>Unit</i>	(3) <i>Weight- millions of units</i>	(4) <i>1910 Price</i>	(5) <i>1910 Price x wt.</i>	(6) <i>1911 Price</i>	(7) <i>1911 Price x wt.</i>
Corn	bu.	2,886	\$.480	\$1,385,280,000	\$.618	\$1,783,548,000
Cotton	lb.	5,805	.141	818,505,000	.088	510,840,000
Hay	ton	69	12.140	842,273,200	14.290	991,440,200
Wheat	bu.	635	.883	560,793,300	.874	555,077,400
				<u>\$3,606,851,500</u>		<u>\$3,840,905,600</u>

$$\$3,606,851,500 : \$3,840,905,600 :: 100 : 106.5$$

What has really been compared here is the total cost of our selected bill of goods in 1910 with the total cost of the same

bill of goods in 1911. This gives a satisfactory indication of changes in the purchasing power of money over the particular bill of goods in the index.

Having now given some brief indication of the methods by which index numbers of prices are constructed, we shall proceed to a concise description of the various price indexes currently published in the United States with a view to discovering how adequately they perform the function of measuring changes in the value of money.

Current price indexes in the United States.—Until recently, the nearest approach to an index number showing changes in the value of the dollar was the general purpose index of wholesale prices, published monthly by the Bureau of Labor Statistics. This index number, which has recently been revised, is now computed from 887 price series. The index is calculated by taking an aggregate of the included price series weighted by the average of the quantities produced in the years 1929 and 1931.³ This aggregate is then expressed as a percentage of the aggregate for the base year, which is now 1926. This index number is satisfactory as regards its technical construction and does show accurately the movements of the level of wholesale commodity prices in the United States. More specifically, it shows changes in the cost at wholesale of a group of widely assorted commodities at monthly intervals. The Bureau of Labor Statistics also publishes a weekly index of wholesale prices and has recently begun publication of a daily index. Other wholesale price indexes are also published, but the B. of L. S. index is of outstanding importance.

Aside from its wholesale price indexes, the Bureau of Labor Statistics publishes a retail food price index for 51 cities and a cost of living index based on cost of goods purchased by wage earners and lower-salaried workers in 33 large cities. The former appears monthly and the latter quarterly. Both are computed on a 1935-1939 base. The National Industrial Conference Board also computes and publishes an important cost-of-living index monthly.

The index numbers noted above cover a fairly compre-

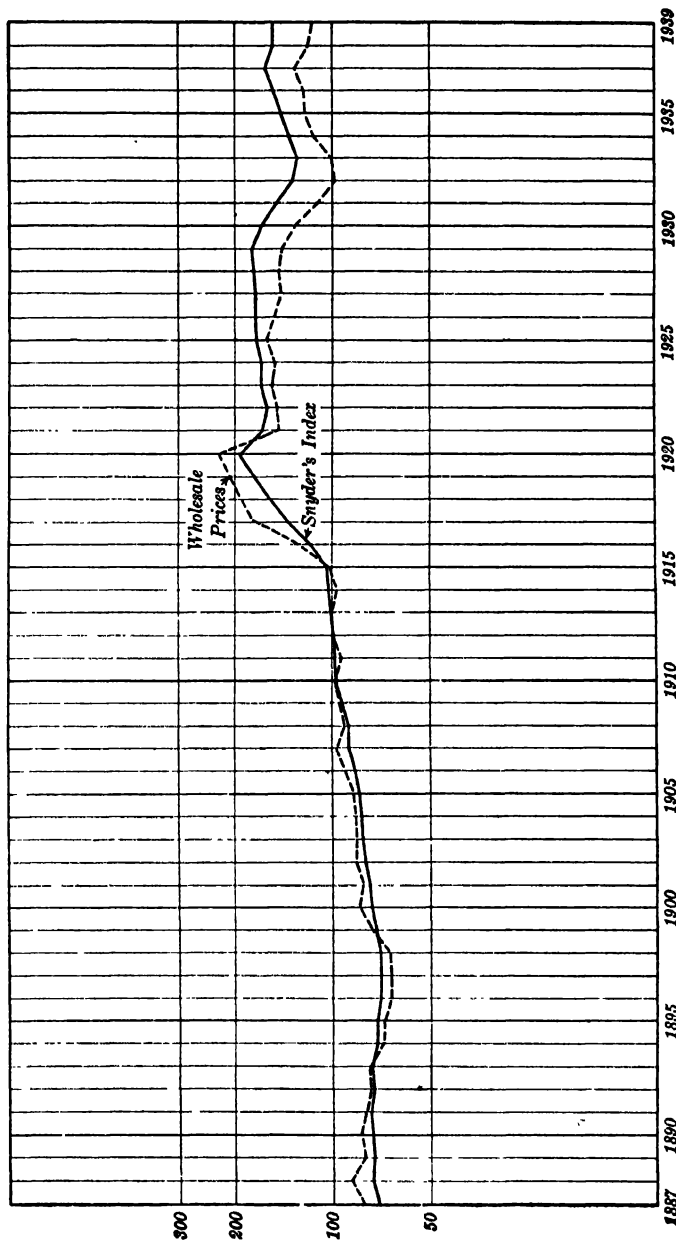
³ Except that for agricultural commodities the averages for the three years 1929, 1930 and 1931 are used.

hensive list of price quotations. Others, such as Moody's daily index of staple commodity prices and the Guaranty Trust Company's index of 25 commodity prices at wholesale, are much less comprehensive in scope. These are much more sensitive than the B. of L. S. wholesale price index. Finally, there are available many indexes of security prices, among which those of the Standard Statistics Company may be noted.

General purpose numbers and changes in the value of money.—Presumably, the distinction to be drawn between general and special purpose price index numbers is that the latter are meant to show variations in specific groups of prices only, while the former, being more inclusive, are supposed to indicate differences in the general level of prices at different dates, i.e., to measure changes in the value of money. As a matter of fact, this is the distinction which is generally made, and business men and students alike ordinarily consider a rise or fall in the Bureau's wholesale price indexes as recording a decline or increase in the value of money. This attitude is of questionable validity. After all, these index numbers are, in a sense, also special purpose numbers. They record changes in the general wholesale price level of physical commodities, but this is all. They do not show changes in retail prices, the level of which apparently changes both less rapidly and in less degree than that of wholesale prices. They take no account of wages, the price of labor. They are not influenced by variations in urban house rents. In fact, there are many important elements in the entire price system which are not included in these so-called general purpose index numbers, and it by no means necessarily follows, because wholesale prices are rising or falling, that these other price elements are moving in the same direction or with the same intensity.

A measure of the general level of prices.—Early in 1926, the Federal Reserve Bank of New York, in its *Monthly Review of Credit and Business Conditions*, began to publish a composite index of the general price level which met many of the objections cited in the preceding paragraph. This index has been compiled under the direction of Carl Snyder and will be referred to from now on as Snyder's

CHART XVI. SNYDER'S INDEX OF THE GENERAL PRICE LEVEL AND THE WHOLESALE COMMODITY PRICE LEVEL (B. L. S.), 1887-1939



Sources: Snyder's Index. *Business Cycles and Business Measurements*, 1887-1913, p. 286. *Review of Economic Statistics*, Feb., 1928, 1913-1927, p. 49. *Wholesale Prices*, Bureau of Labor Statistics.

index. As first published in the *Review* this index included wholesale commodity prices, wages, cost of living, and rents. Commodity prices were given a weight of 2 ; wage payments (including unskilled labor, clerks, and teachers), $3\frac{1}{2}$; cost of living, $3\frac{1}{2}$; and rents, 1.⁴ The chief criticism seemed to be that since Snyder had run the index back to the year 1875 there was chance for doubt concerning the completeness of the data used for the earlier years, while the weight given to each element in the index may seem questionable.⁵ In 1927, this index was revised back to 1913, and now represents a more complete and accurate estimate of the general price level than would have been possible to obtain a comparatively few years ago. The revised index⁶ includes twelve price groups with weights as follows :

	<i>Weight</i>
1. Industrial commodity prices at wholesale . . .	10
2. Farm prices at the farm	10
3. Retail food prices	10
4. Rents	5
5. Other cost of living items	10
6. Transportation cost	5
7. Realty values	10
8. Security prices	10
9. Equipment and machinery prices	10
10. Hardware prices	3
11. Automobile prices	2
12. Composite wages	15

Clearly, such an index is bound to furnish a better measure of changes in the value of money than any index computed from wholesale commodity prices alone. A comparison of the movements of the wholesale commodity price level and the general price level from 1887 to 1939 is shown in Chart XVI.

The best measure of the value of money.—It is a simple matter to state that the value of money is equivalent to its purchasing power over goods and services in general, yet the problem of obtaining a satisfactory index num-

⁴ Snyder, *Business Cycles and Business Measurements*, pp. 135-138.

⁵ Compare Mitchell, *Business Cycles, New Edition*, p. 305.

⁶ For a complete discussion of this index, see Snyder's article in the *Review of Economic Statistics*, February 1928, pp. 40-52.

ber to measure changes in the purchasing power of money is difficult. Objections to the use of wholesale commodity indexes for this purpose have been given and it was indicated in the preceding paragraph that Snyder's index constitutes a more satisfactory measure than the wholesale index numbers. Even Snyder's index, however, is not entirely satisfactory, chiefly because it includes the prices of investments, such as security prices and realty values. Although items of this sort are purchased with money, it is more reasonable to confine the definition of the value of money to its purchasing power over goods and services, not over future income. That is, the proper measure should be in the nature of a consumption index. For this reason, Mr. J. M. Keynes, the brilliant English economist, prefers Snyder's earlier or unrevised index to the revised one as a measure of changes in the value of money.⁷

Under the circumstances, it might be thought that a cost of living index of the type already described would be most suitable for measuring changes in money value. Such indexes, however, as at present constructed, do not cover a wide enough range of prices to be highly satisfactory. In spite of this, it is interesting to note that the movement of the Bureau of Labor index of the cost of living followed that of Snyder's revised index very closely from 1922 through 1927. After 1927, on the other hand, the extreme fluctuations in security prices caused Snyder's index to move through a wider amplitude than did the index of the cost of living.⁸

Conclusion.—The foregoing remarks are not to be construed as a criticism of such index numbers as those of the Bureau of Labor Statistics. They are excellent indexes and serve very useful purposes. It is an extremely desirable thing to know whether commodity prices are rising or falling, and these indexes show this satisfactorily as regards wholesale prices. The objection is to the assumption that changes in these index numbers measure at all accurately

⁷ See J. M. Keynes, *A Treatise on Money*, 1, 53 ff. Mr. Keynes, however, emphasizes the fact that Mr. Snyder's aim is an index number of all cash transactions, and that, for that purpose, the revised index is superior to the old one.

⁸ Unfortunately, in the author's opinion, publication of Snyder's index was discontinued at the end of 1939.

alterations in the value of money. To hold that they do is only somewhat less absurd than to claim that a rise or fall in the prices of agricultural commodities, or of wheat alone, shows a decline or increase in the value of money. Although less extreme, the absurdity is still there. A decline in commodity prices may be offset, wholly or in part, by higher wages, or higher house rents. The student should realize the value of price index numbers of all sorts, but he should also have a full realization of just what the various indexes which are available do, in fact, measure.

REFERENCES

- Keynes, J. M. *A Treatise on Money*.
King, W. I. *Index Numbers Elucidated*. New York. 1930.
Mills, F. C. *Statistical Methods*, Chapter VI. New York. 1924.
Mills, F. C. *The Behavior of Prices*, Chapter III, Section III, New York. 1927.
Snyder, C. *Business Cycles and Business Measurements*, Chapter VI. New York. 1927.

CHAPTER XXVI

THE DETERMINATION OF THE VALUE OF MONEY

Introduction.— We are now in a position to turn our attention to the question of the manner in which the value of money is determined. Since the problem is one of great difficulty, it will be well to attack it by degrees, ruling out, for the present, what we may call abnormal situations such as those which prevailed during and after the Great War, and concentrating our attention on the analysis of the problem under relatively stable conditions.

Superficially it is correct to say that the value of money, like the value of any economic good, is determined by the demand for it in relation to the supply or quantity of it. Since, however, the conditions governing the supply of and demand for money are different from those which apply in the case of other economic goods, it will be necessary to study the forces governing both of these factors before we shall be able to arrive at any definite conclusions.

Two approaches to the problem.— The problem of the determination of the value of money may be approached from two different angles. The first of these, for want of a better name, we shall call the "cash-spending approach," while the second is generally referred to as the "cash-balance approach." The former method has been the one most generally followed in the past by American monetary theorists, the latter by English students of money. At present, however, there seems to be a tendency on the part of American writers to adopt the cash-balance method of attack. Both approaches to the problem have some merit, and it will be advisable to examine each in some detail.

The cash-spending approach.— In this approach to the problem of the value of money it is, as the name implies, the spending of money which is emphasized. The utility of

money, it is claimed, lies solely in its ability to command goods and services in exchange, not in any inherent capacity to satisfy wants. This being so, we may be quite certain that the entire quantity of money in the hands of the people will be offered regularly on the market for goods and services. Money not being wanted in itself thus differs from other goods which are themselves capable of satisfying wants. Money is not demanded, then, in the sense that goods and services are demanded. The people will take any amount that they can obtain, but it will all be spent on goods and services (including investments) and its value will therefore vary in exact proportion to changes in the quantity. Like any other economic good, the value of money varies inversely as the quantity, given the conditions of demand, but it differs from other economic goods in that the variations are in proportion to changes in the supply of money.

In these circumstances it is apparent that the value of a country's money is equal to the value of the goods obtained in exchange for it. Over a given period of time, as a year, however, the money will change hands a number of times in exchange for various goods and services. The value of the country's money, then, will be equal to the value of goods and services obtained in exchange divided by the average number of times that the stock of money changes hands for business purposes throughout the year.

The equation of exchange.—This relationship may be made clearer by the use of symbols. If we call the total value of the country's money M , and its average turnover or velocity of circulation, v , and the total amount of money transactions, T , then

$$M = T/v$$

If there are n units of money, then the value or purchasing power of each unit, p , will be equal to M/n . Then, dividing our first equation through by n , we have

$$M/n = T/nv$$

Substituting p for M/n ,

$$p = T/nv$$

This gives us an algebraic expression which is known as the equation of exchange. The purchasing power of the money unit, p , however, is the inverse of the price level (a higher price level meaning that less goods can be purchased for a unit of money and vice versa), and since, in practice, we measure changes in the value of money by means of index numbers of the price level, it will be advisable to invert our equation in order to obtain the price level in place of the purchasing power of the money unit on the left side of the equation. If we call the general level of prices, P , then

$$P = nv/T \text{ (i)}$$

In this equation, T represents the vast aggregate of goods, services, and securities which have been exchanged for money over the period of a year. Some of the goods composing T will have changed hands more than once, but these exchanges all constitute part of the total business transactions for the year and so are included in the aggregate which is represented by T . Since the number of units of money, n , is not so great as the number of business transactions, T , each unit of money will change hands a number of times in the course of the year, and the average number of times which all of the units of money change hands is indicated in the equation by v , and is usually termed the velocity of circulation of money. P represents the sum of all of the prices of the components of T and may be considered as an index number of the general price level of all money transactions.

The demand for money. — In the cash-spending approach to the problem of the value of money the demand for money is thought of as dependent on the volume of transactions, T ; i.e., the goods, services and securities coming onto the market and exchanged for money. If this demand remains constant, the value of the money unit will vary inversely and proportionally as the quantity of money; or, to state the matter in terms of our final equation, the general price level, P , will vary directly and proportionally as the amount of money, n . This assumes, of course, that v does not vary independently of T , but if we accept the reasoning that money is wanted only to spend, this assumption is justified.

As a matter of fact, the demand for money, understood as

T , does not remain constant, but rather tends to increase over a period of years in a progressive country. Nevertheless, the complexity of economic phenomena has made necessary the assumption of practically static conditions in working out economic laws and principles. We may grant, therefore, the legitimacy of the assumption that T remains constant for the purpose of determining the value of money. This would mean that, in practice, allowance would have to be made for increases in population and productivity in trying to determine the effect of changes in the quantity of money on its value.

Leaving a critical estimate of the value of this method of attacking the problem to a later point, we shall next turn our attention to the approach of the cash-balance theorists.

The cash-balance approach.—In approaching the problem of the value of money from the cash-balance viewpoint, emphasis is placed on the amount of money which is held, rather than on the amount spent. It is apparent that each individual in any given country holds a certain portion of his income or resources in the form of money at all times. What proportion of his income is so held depends partly upon the individual and partly on the habits and customs of the country, factors which will be discussed later. For the present it may be noted merely that the value of the money held by each individual is equal to the value of the goods and services which he gives up in order to hold the amount of money which he keeps, on the average, in his possession. The total value of the money stock will then be equal to the value of the sum of all the individual balances held.

Thus, if the people of a country hold, on the average, a proportion of their real incomes equal to k in the form of money, and if the total annual real income of the country is equal to R , and the value of the country's money to M , then

$$M = kR$$

If, as before, we call the number of units of money n , then the value of each unit, p , would be M/n . Dividing both sides of the equation through by n , we have

$$M/n = kR/n$$

Substituting p for M/n ,

$$p = kR/n$$

Or,

$$P = n/kR \text{ (ii)}$$

where P is the price level which is the inverse of p .

In this equation, so long as kR remains constant, P will vary directly and proportionally as n . If the people of the country insist on holding in the form of money only a sufficient amount of purchasing power to obtain a fixed amount of R , then the proportion of R held as money will decrease as R increases, and variations in P will be directly proportional to changes in the quantity of money, n . If, on the other hand, the public insists on holding a fixed proportion of its real income in the form of money, an increase in R will result in a corresponding increase in kR , and, barring any change in the quantity of money, P will tend to decline.

The demand for money.—Looked at from the cash-balance standpoint, the demand for money is found to consist of the stocks of money which the people of a country decide to hold and is dependent on the amount of goods and services which are foregone in order to retain this amount of money in their possession. Although this notion may at first seem confusing, it has the distinct advantage of linking up the nature of the demand for money with that of the demand for other economic goods. The demand for money is determined by the desire of the people to hold stocks of money as such. It will be worth our while to consider the forces which determine the size of these stocks.

In the first place, it is usually necessary to hold a certain amount of money to care for the regularly recurring monetary transactions in which individuals must participate. A laborer who is paid \$25 a week may spend the entire amount of his weekly income on goods or services, but it will be ordinarily spent in more or less regular fashion throughout the week. His stock of money will accordingly vary from \$25 at the beginning of the week to 0 at the end, but it will average somewhere near \$12.50 for the entire week. A business or professional man who receives his income by the

month or quarter will of course be likely to hold a larger amount of money on the average than the laborer who is paid by the week, since the former's income is likely to be larger and his payments will be spread out over a longer period.

A second reason for holding money is to be able to meet contingencies which may arise, such as unexpected expenses in the way of doctor bills incurred through sudden sickness, and also opportunities to buy something at a bargain or to purchase some unusual and highly-prized object which appears suddenly in the market and for which cash must be paid.

Finally, money may be held for future investment, being accumulated a bit at a time until a sufficient amount is at hand to purchase a share of stock or a bond or to make a sizeable deposit in the savings bank. There are also, in nearly every country, people who distrust savings banks and investments and who accumulate money as a store of value to be used in old age, or to be left to their children.

The amount of money which is held for the two last-mentioned purposes depends largely upon the characteristics and state of mind of the individual. It will quite obviously be larger for the cautious and thrifty than for those who spend their income as they receive it without thought for the future. The amount held for the first reason, on the other hand, chiefly depends upon the habits and customs of the country. If laborers are paid by the month, receiving a wage of \$100, and expend their wages regularly throughout the month, they will, on the average, hold \$50 each as opposed to an average holding of \$12.50 when paid by the week. If it is the custom to buy goods on credit, paying for them at the beginning of the following month and thus utilizing most of that month's money income, the amount of money held will be greatly decreased. Other illustrations could be found to show the effect of habit and custom on the demand for money to hold, but these are sufficient for our purposes.

To sum up, each individual receiving a money income decides just how much of that income shall be held in the form of money and how much shall be expended for goods.

The holding of money has certain advantages, as has been shown, which must be weighed against the disadvantages of foregoing the use of the goods which the money held would buy. Presumably, each individual arrives at a decision as to the amount of his income which it is worth while to hold as money, and his marginal demand for money would be determined by the significance of that unit of money which he finds it just worth his while to hold instead of spending it for goods.

The country's demand for money, under this view, would be equal to the sum of individual demands and would be dependent on the goods and services foregone in order to maintain the stock of money that the public desires to hold. Obviously, where the demand for money to hold on the part of individuals generally is large, a larger stock of money will have to be maintained than would be the case in a country the inhabitants of which had small desire to hold any great part of their incomes in the form of money.

Relation between the two approaches.—The cash-spending and the cash-balance approaches to the problem of the value of money really form two ways of looking at the same thing. If k , in the cash-balance equation, is equal to $\frac{1}{10}$, it is clear that the stock of money changes hands more frequently than if k is $\frac{1}{2}$. In fact, k is nothing more nor less than our old friend v standing on its head. That is, $v = 1/k$. Written in the form of the cash-spending equation, the equation obtained in the cash-balance approach (ii) would be

$$P = nv/R \text{ (iii)}$$

which shows a distinct family resemblance to our first equation (i) except that T appeared there in place of R . This, however, is an important difference, for the price level of equation (i) is the price level of all cash transactions, while the price level of equations (ii) or (iii) is the income price level. As a matter of fact, P in equations (ii) and (iii) more nearly approaches the type of index best suited to measure changes in the value of money than does the cash transactions price index of equation (i); but this is a criticism of the factors used in equation (i) rather than of the method

of approach to the problem. If R is substituted in place of T , as in equation (iii), the factor v would be much smaller than in equation (i), for the income velocity of money is naturally slower than its transaction velocity. For reasons which will appear presently, it will be clear that income velocity is more important than transaction velocity in determining causes of changes in the value of money.

Variations in the normal value of money.—The relations between money and goods which have been brought out in the preceding paragraphs have led to the formulation of a principle regarding the value of money as follows: *Other conditions remaining the same, the value of money varies inversely and proportionally as the quantity.* This is the so-called quantity theory of money, and may be approached, as has been indicated, from either the cash-spending or the cash-holding standpoint. As has also been indicated, in order to warrant the emphasis which the principle places on the quantity of money, it is necessary that the "other conditions" should be moderately stable.

In passing judgment on the validity of the quantity theory, it must be remembered that it is a theory of the normal value of money. By the normal value of money we mean *the value which is always tending to prevail during a given period as a result of the action of those forces which operate throughout the period*, especially the larger of those forces. But though always tending to prevail, we should note that, because of the influence of temporary forces, *the normal value of money seldom if ever does prevail.*¹ Looked at from this point of view, the theory offers a sound explanation of changes in the value of money. The volume of transactions or the annual real income, whichever is used, does tend to increase over a period of years, it is true, but the increase tends to take place at a regular rate and can be allowed for. The other possible variable, v or k (depending upon the approach), tends to be constant. Money is, after all, acquired to be spent and will be spent in the course of time. A change in the habits or customs of the people may, of course, occur and may permanently influence k or v ,

¹ Adapted from F. M. Taylor's definition of normal price. *Principles of Economics*, p. 299.

but, generally speaking, they tend to remain fixed for long periods of time without great alteration.

Our final conclusion, then, must be that the quantity theory, looked at as a theory of normal value, is sound and that it is useful in explaining long-term tendencies in the variation of the purchasing power of money.²

Short-term fluctuations in the value of money.—The quantity theory, as stated in the preceding section, was never intended to apply to short-term changes in the value of money. The fact that it has often been used in connection with short-run changes in the price level is the fault, not of the theory itself, but of those who have been responsible for its misapplication.³ Yet, in spite of this, the short-term changes in the value of money are often of paramount importance. It is accordingly essential to explain these changes in some sort of satisfactory fashion.

In analyzing short-term changes in the price level, it is still possible to use the equation of exchange for purposes of illustration.⁴ We shall find, however, that the cash-balance equation, $P = n/kR$, is more satisfactory than the cash-spending equation for this purpose, since it concentrates attention on balances held in the form of money.

Short-term changes in cash-balances.—Although it is true that, given the habits and customs of the people of a country, the amount of cash-balances held by the people, i.e., their demand for money to hold, tends to be constant, since the ultimate purpose of money is to acquire goods and services in exchange, nevertheless, over short periods of time, this demand may fluctuate considerably. It is quite possible that

² For attempts at statistical verification of the quantity theory, see studies by Professor Gustav Cassel and Mr. Joseph Kitchin, *First Interim Report of the Gold Delegation*, Annexes X and XI, League of Nations, Geneva 1930; and L. C. Wilcoxon, "World Prices and the Precious Metals," *Journal of the American Statistical Association*, XXVII, 129-140. See also an article by the author, "Some Aspects of the Stable Money Question," *Quarterly Journal of Economics*, XLIII, 684 ff.

³ Professor Fisher, in *The Purchasing Power of Money*, made quite clear the fact that the quantity principle applied to normal value of money; in some of his more popular works, however, e.g., *Stabilizing the Dollar*, he seems to have overlooked this qualification of the theory to a large extent.

⁴ The equation of exchange is often wrongly confused with the quantity theory of money; e.g., see C. Whitney, "The Equation of Exchange and the Price Stabilization Problem," *American Economic Review*, XXII, p. 235. It should be obvious that the algebraic expression of a truism is not identical with a theory which attempts to explain the cause of changes in the value of money.

fear, uncertainty over the economic outlook, or some other factor, may result in people increasing the proportion of their incomes which they hold in money. In other words, for the time being, they may prefer money to other goods or investments, and hence may refrain from spending as large a proportion of their money incomes as usual. In such circumstances, there is an increase in the demand schedule for money, more money being wanted at every value than before, and the effect of this increase in demand will be a fall in the price level.

An increase in the demand for money of this sort occurred in the United States in 1931. Many individuals increased materially the proportion of their incomes and property which they held in the form of money, as evidenced by the statistical data on money in circulation (an undoubted misnomer since the money was most decidedly not circulating) and by the anti-hoarding campaigns of the administration and others.

The manner in which an increase in the demand for money to hold brings about a decline in the price level may be made clear by a simple example. Assume a community which uses only hand-to-hand money and which has a fixed money stock. The people are engaged in producing goods and selling them to others, each individual's product being sold for money and furnishing him with the purchasing power to buy the product of others. So long as the money which is received by individuals is used regularly to purchase the products of others, the economic machine will run smoothly enough. Assume, however, that a considerable number of the people of the community, having sold their products or services for money, proceed to hold that money, or a large part of it, instead of spending it. Obviously, the people with the products which these hoarders have been in the habit of buying will be confronted with an unpleasant prospect. They have the goods ready to sell, but the market for these goods has largely disappeared. What are they to do? Clearly, they must try to persuade the hoarders to loosen their purse strings and purchase the goods offered. There is no better way to do this than to lower the prices of the goods to be disposed of, and this, in fact, is precisely what is done.

Even then the goods may not be sold readily. The hoarders, finding that they have the tradesmen on the defensive, put extra locks on their strongboxes and wait for the next move. The tradesmen, becoming desperate, reduce their prices still further in the hope of enticing buyers with bargains. This may keep up for some time, but eventually the tradesmen refuse to lower their prices any further, and the hoarders, confident that prices have finally reached rock bottom, cheerfully unlock their strongboxes and buy the goods at great advantage to themselves, and, incidentally, at the expense of the rest of the community. With an unusual and rather general decrease in the demand for money to hold, i.e., in cash-balances, the effects will be just the opposite of those here pictured. We shall have occasion to refer to such a situation in a later chapter.⁵

The velocity of circulation of money.—If we now shift from the cash-balance to the cash-spending approach, using the equation $P = nv/R$, it is obvious that changes in the demand for money to hold are identical with inverse changes in the velocity of circulation. Thus, an increase in demand of the sort described above would have the effect of decreasing v in the cash-spending equation. The result, as shown, is a decrease in P , and should require no further discussion. Certain monetary theorists, however, have insisted that a change in v has no power to bring about a change in P , since any change in the velocity of circulation of money is bound to be offset by a corresponding change in the velocity of circulation of the goods and services composing R .⁶ It is, of course, true that as v decreases R also decreases, if R is understood to be goods and services actually sold on the market for money. But if we consider R as consisting of goods and services which are produced for the market, to be sold eventually, of course, then it is clear that a decrease in v coming at a particular time will leave traders and dealers with goods to be sold, but not yet sold, and will induce dealers to lower their prices in order to move their goods. The goods will be sold in the end, but, because of the lower prices, they

⁵ Chapter XXVIII.

⁶ See an excellent article by A. W. Marget, "The Relation between the Velocity of Circulation of Money and the 'Velocity of Circulation of Goods,'" *Journal of Political Economy*, XL, 289-313, and the references there cited.

may be disposed of without a corresponding increase in the velocity of circulation of the whole stock of money. This is so obviously what happens that it does not seem worth while to labor the point further.

Significance of "income velocity."—Before leaving this phase of the subject, it should be noted that it is what we have termed the income velocity of money which is important as a factor affecting the price level. That is, it is the rate at which individuals spend their money incomes for consumption or investment goods or for services which is significant in determining the amounts and prices of such goods and services which can be profitably disposed of in the market. For, clearly, if any large part of the population increases its holding of cash, preferring cash to goods, this is going to result in a temporary partial cessation of the money demand for goods. The first effect of this will be a fall in the prices of goods already produced for the market, as already explained, but if the people with large cash-balances continue to spend little, even at the lower prices, production will be curtailed, and unemployment, with an accompanying further drop in the demand for goods, will ensue. Once this state of affairs has been reached, it is necessary for those with money stocks to spend them in order to revive the demand for goods and bring about an increase in productive activity.

Thus, although it is true that changes in the velocity of circulation of the money of manufacturers, financiers, and traders are not unimportant, such changes are apt to result from variations in income velocity circulation, since business men find a profitable market for their products only when the people of the country, as consumers and investors, are willing and able to buy these products at the prices at which they are offered.

Factors determining the supply of money.—Up to this point the discussion has revolved around the demand for money and the extent to which this demand may properly be considered as constant, and it has been shown that it tends toward constancy in the long run. Changes in the normal value of money are accordingly closely connected with variations in the quantity of money available, allowance being

made for the long-term tendency of productivity to increase. This being so, it is necessary to turn our attention to those factors which determine, or limit, the volume of money.

Simple conditions assumed.—There are so many factors affecting the supply of money under modern conditions that it will require several chapters to discuss them all in detail. In this chapter we shall consider the question under the simplest conditions by assuming an isolated country without any banks and using a gold currency only. The gold coins in use, moreover, are, we shall suppose, freely and gratuitously struck at the mint and no restriction is placed on the melting of coins in order to obtain bullion for use in the arts. It will also be necessary that gold be produced within the boundaries of our hypothetical state, since we have assumed the country to be isolated.

In these circumstances, given the conditions of demand for money, its value will tend to be equal to the marginal cost of producing gold. But gold, being a commodity, is used in industry and the arts, as well as serving as a medium of exchange, and we have only assumed constancy in the demand for money, not in the demand for gold in all uses. Before discussing the cost of production of gold, therefore, it will be necessary to consider the influence of the non-monetary uses of gold on the demand for it.

The demand for money and the demand for gold.—If gold were used for monetary purposes only its value would be determined by its marginal significance (i.e., the significance of the last unit that the people felt it just worth while to hold as money) and its marginal cost of production (i.e., the cost of producing the last unit which it was just profitable to produce). Since gold is used for non-monetary purposes, however, it has a joint demand. The first unit of gold would be put to its most important use, whether monetary or otherwise, and subsequent units would be put to this same use until it became desirable to divert additional gold to some other purpose rather than putting any more of it to its first use. Clearly, however, as long as gold could be transferred from one use to another, the utility of the marginal unit of gold in each use would be the same, for if the marginal utility or significance of gold devoted to one purpose became

greater than its marginal significance for another purpose, gold would be diverted from the latter to the former use until the marginal significance was the same in both instances.

Accordingly, as long as gold is freely and gratuitously coined and may be freely melted for use in non-monetary lines, there will be no more than a temporary divergence of the marginal significance of money from the marginal significance of gold in other uses. It is correct to say, therefore, that the value of money, under the assumed conditions, is determined by the marginal significance of money and the marginal cost of producing gold.

The cost of production of gold.—In practice, gold is obtained either from placers or from gold-bearing ore. Placer gold is found in nuggets or particles in alluvial or glacial deposits, and, once a placer is discovered, such gold as it contains may be obtained with comparatively little effort. In other words, there is relatively little, if any, relation between the cost of production of placer gold and the quantity obtained. A rich placer will yield a large volume of gold with little effort; a poor placer may not yield enough to cover the cost of living of the prospector who is working it.

The mining of gold from ore, on the other hand, is done on a strict cost basis, and the gold so obtained is in the nature of an increasing-cost good. Some gold can be produced at a relatively low cost per unit; but, since added units can be obtained only by sinking shafts to lower and more expensive levels, or by refining poorer grades of ore, any marked increase in production involves increased costs per unit. It should be remembered, of course, that this tendency toward increasing costs may be offset by the introduction of new and more efficient methods of mining or refining the ore, as well as by the discovery of new rich mines. Given the conditions of production, however, the production of gold can be increased only at an increasing cost per unit of output.

Although many of the earlier important gold discoveries were of a fortuitous nature, the great bulk of the gold produced at present is mined from ore on a strict cost basis. We shall assume that the gold produced in our hypothetical country is mined from ore and is hence a typical increasing-cost product.

The selling price of gold. — If the business of gold mining is to be profitable, the price at which the gold is sold must cover the expenses of labor, materials, etc., used in the mining, and allow a margin in addition for profit. In a country on a full gold standard, however, the price of gold is fixed by the law and remains unchanged at all times. Consequently, if the money costs of mining gold increase, the selling price remaining fixed, the margin of profit decreases. This means that the marginal mines or levels, the ones that were just making a profit before costs increased, will become unprofitable and will be shut down, thereby decreasing the output of gold. In the opposite fashion, a decrease in money costs of production will increase the margin of profit and result in an increase in the production of gold.

But changes in the money costs of production of gold tend to vary inversely with changes in the value or purchasing power of money; for if the price level rises, i.e., the value of money decreases, labor and material costs will tend to go up, and gold production will tend to decrease; whereas, if the price level falls, the result will be just the opposite. If variations in the profitability of mining gold were to vary *exactly* with changes in the value of money, it would be necessary for all prices (including wages and capital costs) to rise or fall in unison. In practice, of course, some prices rise or fall more rapidly than others, so that changes in the profitability of mining gold do not keep pace with changes in the purchasing power of money. Nevertheless, there is not likely to be any marked rise or fall in the value of money without some corresponding, but inverse, change in mining costs. It is therefore correct to say that the amount of gold produced *tends* to vary with changes in the purchasing power of money.

Under conditions of the sort here assumed, a long-term increase in the economic productivity of the country would result in a downward tendency in the price level which would, in turn, tend to stimulate the production of gold. The new gold would, of course, exert a stabilizing influence and would tend to keep the price level from falling as far as would otherwise have been the case. If the productive efficiency of the country is on the increase, however, it is reasonable to

assume that more economical methods of producing gold will accompany the increase in efficiency in other lines, in which case enough gold should be produced to prevent any long-continued rise in the purchasing power of money.

The demand for gold again.—There is also another factor which tends to stabilize the value of gold, quite apart from variations in the amount produced. This factor results from the nature of the non-monetary demand for gold. The non-monetary uses of gold are found chiefly in the production of jewelry, watches, ornaments, etc., the demand for which is decidedly elastic. That is, a very small change in the value of these goods results in a large change in the amount demanded. The demand for money, on the other hand, tends toward unity. That is, a change in value tends to result in an exactly proportional change in the demand for money. Accordingly, if the value of money rises somewhat, the demand for money will tend to decrease in proportion, but the non-monetary demand for gold will decrease much more than in proportion to the change in the value of gold. The marginal significance of gold as money will hence tend to rise above the marginal significance of gold used in the arts, and there will be a tendency for gold to flow from the arts into the monetary stock until the marginal significance in both uses is equalized. In effect, an increase in the supply of money will occur without a corresponding increase in the total stock of gold.

Conclusion.—In a country on a full gold standard with no credit money in use, the quantity of money is limited by the cost of producing gold together with the relative marginal significance of gold used as money and gold used in the arts. When gold is extracted from ore on a cost basis, a fall in the price level tends to bring about an increase in the production of gold which prevents the decline in prices from going as far as it would otherwise have done, and vice versa, while the elasticity of the non-monetary demands for gold leads to an increase in the amount of gold used as money when the price level declines and to a decrease when the price level rises. In these circumstances, the normal value of money tends to be relatively stable, although new gold discoveries, particularly discoveries of placer gold,

will introduce an element making for depreciation in the purchasing power of money.

Under modern conditions the quantity of money is not so clearly and definitely limited. Credit money is used much more widely than is gold as a medium of exchange and, by our previous definition of credit money, the proportion of gold needed for a given amount of monetary transactions is thereby sharply decreased. Or, stated differently, with a given amount of gold, the use of credit money permits a large increase in the quantity of exchange media. Our next task, then, is to determine the effect of the use of various kinds of credit money on the value of the money unit.

REFERENCES

(The following references are for Chapters XXVI to XXVIII inclusive)

- Anderson, B. M. *The Value of Money*.
 Cannan, E. *Money*.
 Carothers, N. *Fractional Money*.
 Cassel, G. *Money and Foreign Exchange after 1914*. New York. 1923.
 Dulles, E. L. *The French Franc, 1914-1928*. New York. 1929.
 Fisher, I. *The Purchasing Power of Money*.
 Graham, F. D. *Exchange, Prices, and Production in Hyper-Inflation : Germany, 1920-1923*. Princeton. 1930.
 Harris, S. E. *Monetary Problems of the British Empire*. N. Y. 1931.
 Kemmerer, E. W. *Money and Credit Instruments in Their Relation to General Prices*.
 Keynes, J. M. *Monetary Reform*. New York. 1924.
 Keynes, J. M. *A Treatise on Money*.
 Laughlin, J. L. *Money, Credit, and Prices*.
 Marget, A. W. "Leon Walras and the 'Cash-Balance' Approach to the Problem of the Value of Money," *Journal of Political Economy*, XXXIX, pp. 569-600.
 Marget, A. W. *The Theory of Prices*. New York. 1938.
 Marshall, A. *Money, Credit and Commerce*.
 Mitchell, W. C. *A History of the Greenbacks*.
 Mitchell, W. C. *Gold, Prices, and Wages under the Greenback Standard*. Berkeley. 1908.
 Pigou, A. C. "The Value of Money," *Quarterly Journal of Economics*, XXXII, November, 1917.
 Robertson, D. H. *Money*.
 Rogers, J. H. *The Process of Inflation in France*. New York. 1925.
 Schacht, H. *The Stabilization of the Mark*. New York. 1927.
 Willis, H. P. and Chapman, J. M. *The Economics of Inflation*. New York. 1935.
 Young, J. P. *European Currency and Finance*.

CHAPTER XXVII

BANK CREDIT MONEY AND THE VALUE OF THE STANDARD

Introduction.—As a matter of fact, no such simple monetary system as that assumed near the close of the preceding chapter has ever existed. By the time that the single gold standard was generally adopted, banking systems of one sort or another were already in existence and were responsible for the existence in the currency system of bank credit money. At present, as noted in earlier chapters, bank notes and the check currency form the most important elements, from the standpoint of quantity, in the monetary systems of advanced countries. In order to bring the monetary situation in our hypothetical country more into line with reality, therefore, it will be necessary in the present chapter to introduce a banking system and the use of bank credit money in the form of bank notes and checks. We shall first consider the effect of bank note issues on the purchasing power of the money unit.

Elastic bank note issue assumed.—In studying the effect of bank note issues on the value of the standard money, we shall, as before, assume a country without outside connections, and with a standard money of gold coin. In addition, we shall now suppose the existence of a single large bank with branches with the power to issue notes secured by commercial paper up to any amount, provided that a reserve of standard money equal to 25 per cent of the notes in circulation is maintained at all times. Thus we shall have in our assumed monetary system an elastic system of note issue with a possible expansion of four times the amount of standard money available as reserve. Under these postulated conditions, the bank proceeds to issue its notes which are redeemable in gold at any of its offices.

For a time the bank will receive deposits in gold coin,

but when deposits are withdrawn, assuming that the bank is anxious to build up its gold reserve, payment to the depositor will be made by the bank in bank notes until, finally, practically all of the gold coin of the country except that held against government credit money will be lodged in the vaults of the bank and bank notes will constitute the chief circulating medium of the country. As long as the amount of notes outstanding is no greater than the gold reserve, there will be no economy in the use of gold and the notes will amount to nothing more than gold certificates as a practical matter. This situation, however, will not long continue. Presumably the bank has been building up its gold reserve so that it might expand its note issues and increase its profits by lending out notes to borrowers. The notes resulting from such loans will constitute an increase in the total amount of money, and this increase might conceivably continue until the total of notes allowed by law had been issued, after which the stock of money would be greater by four times than before any notes were issued.

Effect of such note issues on prices.—In spite of the increase in the stock of money, assuming expansion of note issues has occurred as suggested above, there is no likelihood of a corresponding rise in prices if the bank has made its loans for the purpose of assisting in the production or marketing of goods. To illustrate, a manufacturer, let us say, desires additional funds to assist him in the production of goods for the market. He goes to the bank and borrows \$100,000 for this purpose. The bank grants him the loan on the understanding that he will repay it from the funds received when the goods he intends to manufacture are sold. The manufacturer then receives the proceeds of his loan in the form of bank notes. Some of these notes he will use to pay his employees' wages, some to buy material, etc. The notes are thus put into circulation. In the course of a reasonably short time the goods are finished and sold. The manufacturer receives payment for them, pays off his loan at the bank, and an amount of notes corresponding to the amount borrowed is retired from circulation.

The fact that the notes are in use for, say, four to six months, during which time the manufacturing concern is

producing and selling its goods, increases the quantity of money during that period, but does not necessarily lead to any increase in prices. In an established banking system the situation is complex and requires careful analysis. The manufacturer, as noted, uses the borrowed funds in part to pay wages and in part to buy materials for manufacturing his goods. In paying wages he is buying the services of his laborers, who, in turn, spend the funds so obtained in buying the various goods and services which they themselves require. But the dealers from whom the laborers purchase their goods will be using a major part of these funds to repay their own indebtedness, either to the bank or to trade creditors, while the part not so used constitutes their own income—payment for their own services. Thus we find that the notes loaned to the manufacturer are used either to pay for services rendered or to retire previous indebtedness. In neither instance would they exert much tendency to raise prices.

With respect to the portion of the borrowed notes which the manufacturer pays for materials, it is very likely that the seller of these materials will also have borrowed from the bank and that the notes so received by him will be used in large part to repay his loan. If so, they will not be circulating during the entire period of the manufacturer's loan, but will be returned to the bank after being used in a single payment. The bank may, of course, lend these notes out again at once to another borrower, but the latter would then be in the position of the manufacturer of our illustration, and to trace the course of those notes would be merely to repeat what has already been said.

The bank will, as a matter of fact, attempt to keep its notes loaned out steadily, which results in an increase in the amount of money in the hands of individuals paralleled by an increase in the amount of goods and services coming onto the market. The increased flow of goods and services will counterbalance very largely the increase in the supply of money. If, for any reason, such as an increase in the demand for money to hold (an increase in cash-balances), the demand for and the production of goods slow down, borrowers will repay their loans, taking whatever loss is neces-

sary, and will refrain from requesting new ones to the same extent as before the slump in demand. The volume of bank notes in circulation will accordingly decrease correspondingly under these circumstances.

Conditions under which note issues raise prices.—

Under certain conditions, however, the issuance of bank notes for lending or investment purposes may have a decided tendency to raise prices. Suppose that the bank, having received some of its notes in repayment of a loan, grants a new loan, not to assist in the production or distribution of goods, but for the purchase of real estate, and that the loan is granted for a period of five years. Clearly currency is here created in excess of the need for it, as measured by the goods and services produced for the market. The bank notes so issued will tend to remain in circulation for five years.¹ During that period they will constitute an addition to the quantity of money which is not offset by an increased flow of goods to the market.

To take another example, assume the bank to have purchased \$500,000 worth of new bonds for its investment account and to have paid for these bonds by the issuance of its own notes. This would have the effect of increasing the amount of money by \$500,000. This money will be used, we may suppose, by the enterprises issuing the bonds to buy equipment and build factories for the production of goods, but once this capital equipment has been paid for, the notes, instead of being retired, remain in circulation as long as the bank continues to hold the bonds. Moreover, when the enterprises which have sold the bonds have got under way, loans will be applied for and doubtless obtained to assist in the production and sale of the goods which these enterprises are manufacturing. Although this sort of loan is perfectly legitimate, the total amount of money created in connection with these goods will be equal to the amount of the loans granted plus the \$500,000 invested in the bonds which the bank purchased, the latter \$500,000 remaining in circulation for an indefinite period.

¹ This does not mean that the particular notes will remain in circulation for this length of time, but rather that an amount of notes equivalent to the amount of the loan and in excess of the notes which would have circulated had the loan not been granted, will remain outstanding for five years.

It seems clear then that the creation of bank notes for investment purposes leads to an increase in the quantity of money which is not fully offset by the increased flow of goods and services to the market, and that, other things being equal, the creation of bank notes for such purposes tends to raise the price level and decrease the purchasing power of the money unit.

Before leaving this question, there is one further point which needs explanation. Suppose various individuals come to the bank and deposit with it on savings account some portion of their incomes. Since we have assumed that practically all of the gold of the country is in the reserve of the bank and that the chief circulating medium is bank notes, it is obvious that the bulk of these savings deposits will be in the form of bank notes. From what has been said in the preceding paragraphs, it might be inferred that the bank should not use these notes for making investment loans or purchasing long-term securities. This, however, is not the case. The deposits in question represent a part of the income of the community which the people have received in exchange for their contribution to the economic product of the community and which they desire to invest (indirectly through the bank) in capital goods. The bank may quite properly invest such notes in bonds or use them in the extension of investment loans without unduly increasing the quantity of money or tending to raise the price level. There is a great difference between issuing new notes for the purpose of making long-term loans or investments and using for such purposes notes which have been received on savings deposit and which represent a part of the income of the depositors.

Note issues and changes in the demand for money to hold.—So far we have assumed that there have been no changes in the demand for money to hold. From the point of view of normal money value theory, this assumption is justified, but there may actually be very considerable changes in this factor from time to time. If individuals generally desire more goods and less money (to hold) under certain conditions, they will offer less goods for money than formerly and prices will rise. If such an attitude is accom-

panied by an increase in the amount of bank notes, the result will be a more pronounced rise in prices than would otherwise have occurred. Suppose that consumers generally are desirous of increasing their purchases of goods relatively to their holdings of money. Their increased demand for goods will start a rise in prices. Merchants and dealers, observing the strength of the consumer demand, will themselves desire to increase their stocks of goods in more than the usual proportion, not only to sell immediately to consumers, but to build up inventories which they hope to sell somewhat later on at higher prices. If they are enabled to borrow at the bank to acquire these goods, the increase in the amount of bank notes will assist in the further rise of prices, since goods are purchased with these notes which are not intended for immediate sale, so that the life of the loan will probably have to be extended by renewing it when it comes due. Also, the notes get into the hands of other dealers, laborers, etc., and, inasmuch as they are spending larger parts of their incomes for goods and holding less as money than before, the rise in prices will be further accentuated.

On the other hand, an increase in the demand for money to hold on the part of consumers will have a reverse effect. They are unwilling to buy goods except at lower prices, and this decrease in consumer demand is transmitted to dealers who then desire to get rid of their surplus stocks in exchange for money, since no higher — and probably lower — prices are in prospect, and their current debts must be paid. If the bank renews the notes of borrowers at such a time, and even grants them added loans if they so desire, the money so obtained is not used to acquire goods, but to pay debts. Some of it doubtless will get into the hands of employees and others not of the business man class, but even these recipients prefer to hold the money rather than to spend it, and dealers must continue to cut prices in order to dispose of goods and get the money necessary to pay back their debts at the bank. Thus, even though the manufacture of goods is actually decreased somewhat, the increase in the demand for money to hold is sufficient to cause its value to rise, even in spite of a considerable possible increase in the quantity of money.

Inelastic bank note issues.—In the previous discussion, we have considered the effect on the value of money of elastic bank note issues only. As for inelastic note issues, such as national bank notes, their effect on the value of the standard is practically the same as that exerted by government credit money.² When put into circulation, they increase the total quantity of money and, being inelastic, they tend to remain in circulation indefinitely. They thus permanently increase the supply of money and exert a corresponding tendency to raise prices. It must be remembered, of course, that if the gold stock of the country is large, so that the central bank has large surplus reserves, that institution may meet added demands for money by paying out gold, government notes, or other forms of money which are usually considered inelastic. When loans of such money are paid off, the amount in actual circulation is decreased and all forms of money acquire a certain degree of elasticity. In general, however, it may be stated that note issues which do not provide a proper element of elasticity exert a greater tendency toward decreasing the value of money than do issues which are properly elastic.

Similarity between elastic bank note issues and the check currency.—The relation between the check currency and the value of the standard is practically identical in all respects with that of elastic bank note issues of the type which we have been considering, and it will therefore not be necessary to spend a great deal of time on this phase of the subject of credit money. It has been objected, and by an extremely keen student of the subject, that the check currency cannot be said to constitute money, and it will prove advisable to consider this objection before proceeding to take up the influence of the check currency on the value of money. The objection referred to is as follows :³

A still worse error, which has, unfortunately, been countenanced by many high monetary authorities in recent years, is to suppose that the aggregate of deposits is a kind of money (sometimes it is called "bank money") which should be added to the stock of coin and notes existing at any moment. The individual, no doubt, finds "money in the bank"

² To be considered in the next chapter.

³ Cannan, *Money*, p. 81.

much the same as "cash in the house," but the aggregate of all the individuals' balances at their banks is only an amount which bankers are liable to pay, but which they could not possibly pay in cash all at one moment. A liability to pay cash is certainly not cash.

If by cash the standard of value as embodied in the standard coin is meant, Dr. Cannan is quite right in asserting that deposits are not cash. But, in that case, neither are notes, which he includes in the monetary stock. He is also correct in his statement that bankers could not possibly pay all their deposit liabilities at one moment. But, again, neither could most bankers pay *all* of their note liabilities in cash at one moment. The Bank of England, in normal times, could pay a slightly larger proportion of its note liabilities than of its deposits in gold, but the difference is one of degree and not of kind. There can be no quarrel with anyone who wishes to define money as standard full-bodied coin, although the practice of so doing leads to a narrow and somewhat absurd position if carried to its logical conclusion. However, to include notes as money and exclude checks is nothing short of contradictory, as both bank notes and checks are fundamentally the same in nature.

The confusion which has existed in the minds of some with regard to checks and bank notes doubtless arises from two facts. First, bank notes are usually finely engraved and resemble the paper money of the government in general appearance, while checks have no such resemblance to other forms of paper money. Second, checks generally pass from hand to hand but once, or at most a few times, while bank notes may pass from hand to hand many times before being presented for redemption. These differences, however, are merely on the surface. Checks could be as elaborately engraved as bank notes if it were worth while to bother with it. The other difference is more important, apparently, but not fundamentally. A check will ordinarily be used in but one payment before being deposited by the holder because (1) it is made out to the order of a definite party and has to be endorsed before it can be used in making another payment, (2) it is usually for an odd amount, having been created to make a special payment, and (3) the bank is liable to pay the check on demand only as long as the drawer has

a sufficient deposit to his credit to cover the amount of the check. The last reason is the most important. Brown is willing to accept Smith's check because he knows Smith and believes him to have sufficient funds on deposit to cover the check. Williams, who knows Brown but not Smith, would accept Brown's check, but would hesitate to take that of Smith, even though it were endorsed by Brown. Further, Smith's check will probably not be for the right amount, and it is just as easy and much more satisfactory all around for Brown to deposit Smith's check, get the amount of it credited to his account, and then draw a new check of his own to pay Williams.

Compare this process with payment by means of bank notes. The bank note evidences a liability of the bank to pay lawful money on demand. If Smith pays Brown with bank notes, the liability of the bank is transferred from the former to the latter. Brown uses the same notes to pay Williams and the liability of the bank is again transferred. The nature of the transaction would not have been essentially different if Brown had taken the notes received from Smith to the bank, had them canceled, and had obtained new notes representing the same liability with which to pay Williams. Yet this latter procedure is precisely what happens in the case of most payments by check. A new paper evidence of the same liability is used for the second payment.

We have dwelt on this at the risk of considerable repetition because of the necessity of a clear understanding of just why checks are to be considered in a similar light to bank notes. Both act primarily in the capacity of media of exchange, and both fulfill the function satisfactorily, which definitely places them both in the category of money in accordance with our definition.

The relation of the check currency to the value of money.—The similarity between a check and a bank note currency having been demonstrated, it follows that their effects on the value of standard money are similar in nature. The wide use of checks as money permits an economy per unit of money in the need for the standard and the extent of this economy depends upon the proportion of reserves which is maintained against deposits. Because of the fact

that the check currency is expanded through the lending operations of the banks, as in the case of elastic bank note issues, the effect of an increase in quantity tends to be counter-balanced in part by an increase in goods if the banks follow a sound lending policy, and a decrease in productive activity is normally followed by a repayment of loans and some decrease in the quantity of the check currency outstanding. On the other hand, the creation of such currency to purchase investments or the loan of it for investment purposes will have the result of increasing the quantity of money in the hands of the public without any rapid increase, if any at all, in the supply of goods, and prices will thus tend to rise more rapidly than would have been the case if short time loans only, for the production and marketing of goods, had been made.

It is not necessary to repeat what has been said previously concerning the possible results of changes in the demand for money to hold. The facts there given apply equally well to all kinds of money, whether credit or full-bodied. The demand for money is exerted quite without reference to the kind of money, provided only that it is generally acceptable, and acceptable it must be in order to be devoted to use as money at all. Finally, it should be noted that the same considerations with regard to savings deposits and bank note issues apply to the relation between savings deposits and the check currency. Savings deposits are not themselves to be considered as money, since they do not serve as a medium of exchange. They are created by the deposit of money, however, and that money—be it gold coin, bank notes, or check currency—may properly be devoted to investment uses.

Conclusion.—In the present chapter we have shown that the use of bank credit money increases the total quantity of money, but that in a properly conducted banking system the use of this type of money does not tend to raise the price level because the effect of the increase in the quantity of money is offset by a corresponding increase in the flow of goods and services to the market. Clearly, however, the creation of bank credit money does permit a larger volume of trade to be carried on with a given amount of gold. Looked at in this way, the use of bank credit money may be

said to prevent the price level from falling, rather than to raise prices.

In addition to bank credit money, credit money may be issued by the government directly, or the note issues of the central bank may, under certain conditions, be made to serve the ends of the government and so become, for practical purposes, a form of government credit money. Logically, perhaps, the issuance of government credit money should be treated prior to a discussion of bank credit money. Because the issuance of government credit money exerts its most potent influence through the banks, however, it has been deemed advisable to give precedence to the discussion of bank notes and the check currency. Having completed this, we shall turn our attention in the following chapter to the influence of government credit money on the value of the standard.

CHAPTER XXVIII

GOVERNMENT CREDIT MONEY AND THE VALUE OF THE STANDARD

Introduction.—The chief form of government credit money in use in modern gold standard countries is subsidiary and minor coin. The United States, Canada, the Irish Free State and certain South American countries, aside from minor dependencies, stand practically alone in the use of government credit money of the larger denominations. In many countries, however, central bank notes are given full legal tender powers and bear an important resemblance to government credit money in certain circumstances. It will accordingly be necessary to take account of central bank issues in certain phases of the ensuing discussion. We shall first consider the effect of redeemable government credit money on the value of the standard, after which attention will be turned to the more important problem of inconvertible government money.

Subsidiary money.—The effect of subsidiary money on the value of the money unit is negligible if the system of subsidiary money is soundly operated and managed. Fractional denominations are essential to the conduct of retail trade, and even the simple gold standard system postulated in Chapter XXVI would require the use of subsidiary and minor coin in order to function effectively. Assuming the fractional coins to be sold by the government for gold, an increase in the quantity of subsidiary money would, at first, be offset by a corresponding decrease in standard gold coin. Since a certain amount of the subsidiary money would always be required, however, a large part of this gold could be paid out again by the government, with the result that the total quantity of money will be increased with no *necessarily* corresponding increase in goods and services. On the other hand, the impediments to trade which the lack of a proper supply

of fractional money imposes are so great that it is more than likely that the introduction of subsidiary money would be fully compensated by an increase in real income.

Once a satisfactory system of subsidiary money is established, changes in the quantity are offset by changes in the amount of standard money, the government selling subsidiary coin for gold and redeeming it, when required, in standard coin from its gold reserve.

Government notes.—When the government issues paper notes which are redeemable in standard coin¹ and maintains a reserve of less than 100 per cent for the redemption of the notes, the quantity of money is increased. The initial effect of the introduction of such notes will tend to be an increase in the price level, as the notes will in all probability be paid out by the government for fiscal rather than for commercial purposes, so that the total stock of money will be increased without a corresponding increase in real income. If the issue is maintained at a fixed sum, as in the case of United States notes, once the effect of the issue has worked itself out on the price system, the notes become a part of the permanent stock of money. Their only effect on the price level then is to keep it from falling as it would tend to do if the issue of paper money were retired.

Our monetary system furnishes another example of government credit money in the form of the silver dollar.² Prior to 1933, the silver dollar was not directly redeemable in gold, but since it was full legal tender, it was accepted by the government in payment of taxes, duties, and other obligations. Inasmuch as the government, in turn, was willing to meet its own obligations in gold, an indirect system of redemption prevailed. The supply of silver dollars was limited to a fixed amount, and the indirect system of redemption was therefore adequate to maintain them at par.

When the quantity of silver dollars was being increased under the acts of 1878 and 1890,³ and again after 1933, the

¹ United States notes in this country and Dominion notes in Canada were examples of this type of paper money.

² The silver five-franc piece occupied a similar position in France prior to the Great War.

³ Under the act of 1890 the increase in currency first appeared in the form of Treasury notes of 1890, secured by silver.

supply of money was increased without regard to the requirements of trade and industry, and an upward tendency on prices was exerted.⁴ As long as the supply of silver dollars was maintained at a fixed level, however, silver dollars and certificates, like United States notes, formed part of the permanent stock of money of the country and affected the value of the dollar only by helping to maintain the monetary stock at its existing level.

Central bank notes.—The notes of central banks, although not government credit money in a strict sense, at times partake of the characteristics of the latter type of money. To the extent that central bank notes are put into circulation to meet the demands of commercial borrowers they are similar to the elastic note issues discussed in the preceding chapter and need not concern us further at this point. In some countries, however, a certain proportion of central bank notes, known as the fiduciary issue, is secured by government or other bonds, and represents, theoretically at least, an amount of currency not greater than that needed by the country at all times. This portion of the central bank's notes bears a strong resemblance to the government notes already described and has a similar effect upon the value of the standard. The same may be said of central bank notes issued to the government by way of loan and secured by government obligations. In countries operating on the gold standard under normal conditions, the amount of notes issued as a result of government loans is usually trifling or non-existent. In times of war or stress, on the other hand, notes of this sort may come to form a dominant element in the currency, especially if gold redemption is suspended. Central bank notes in these circumstances become virtually government credit money and help to bring about a great decrease in the purchasing power of the money unit. Again, in other instances, the government may resort to the issuance of its own notes under stress of war rather than to accomplish its ends through the note issues of the central bank.

Although war conditions are decidedly abnormal, they offer numerous examples of monetary phenomena, an under-

⁴ This was, in fact, offset by other factors, but so far as the silver dollars alone were concerned, the statement is correct.

standing of which will help us to clarify the problem of the value of money. The remainder of the chapter will accordingly be devoted to an analysis of the forces determining the value of money under the stress of war conditions.

IRREDEEMABLE PAPER MONEY

Money in the Great War.—Monetary conditions in the belligerent countries during the Great War furnish an admirable setting for the study of irredeemable paper money issues. It will be impossible to undertake a detailed discussion of the situation in any large number of countries. Nevertheless, a brief description of the wartime monetary developments in England, France, and Germany will serve our purpose satisfactorily. The practices of these countries illustrate differences both in method and in degree of inflation which furnish an adequate basis for our analysis.

England.—The first step taken by the English government in the way of monetary legislation after the outbreak of the War was the passage of the Currency and Bank Notes Act of August 6, 1914. This act gave the Treasury the authority, first, to suspend the Bank Act (i.e., to permit an increase in the fiduciary issue of the Bank of England), and, second, to issue currency notes of £1 and 10s. denominations. The latter were government notes, but were presumably redeemable in gold at the Bank of England, and the Bank's own notes were also supposedly redeemable in gold. The semblance of the gold standard was thus retained, although, in practice, pressure of various kinds prevented either gold redemption or gold export to take place, with the result that the maintenance of the gold standard was a mere legal fiction. In 1916 the melting down of gold coin was made illegal, and, in May 1917, the exportation of gold was definitely prohibited by proclamation. These two steps, however, only served to give official recognition to the existing situation.

Only once during the War, and then only for a few days, did the Bank of England issue fiduciary notes in excess of the legal limit. Otherwise, all of its notes in excess of this limit were secured by 100 per cent of gold as in ordinary times.

The depreciation in the purchasing power of the pound was accordingly a result of the issuance of currency notes and the expansion of the check currency. The actual procedure was somewhat as follows :

The government paid for an order of war materials of, say, £1,500,000 by drawing a check for this amount on its account in the Bank of England. The manufacturer receiving this check deposited it to his credit in one of the joint stock banks which, in turn, sent it to the Bank of England for payment. Payment of the check was then effected by debiting the account of the Treasury and crediting the account of the joint stock bank at the Bank of England. But the joint stock banks look on deposits with the Bank of England as part of their reserves against their own deposits. Consequently, the result of the transaction in question was to increase the reserves of the joint stock banks by £1,500,000, which, for the system of joint stock banks, permitted an increase in their loans and investments and their deposits of several times this amount.

The Treasury, meanwhile, could not rely on taxes alone to meet its requirements. Long-term bond issues were floated from time to time, and in the intervals preceding such flotations the Treasury obtained funds by the sale of short-term Treasury bills to the Bank of England, the joint stock banks, and other investors. The Treasury bills were purchased especially freely by the joint stock banks as, being short-term, they apparently formed admirable commercial banking assets. The banks also made loans to customers collateralized by the unexceptionable security of British government bonds. The Treasury was thus, in reality, put in funds by the expansion of the check currency.

In these circumstances, prices rose rapidly, and the banks were soon faced with increased demands for hand-to-hand money from their customers. The joint stock banks had, however, ample supplies of Treasury bills which would shortly mature, as well as large deposits at the Bank of England (which were being constantly augmented by government purchases) which they could withdraw in cash on demand. They therefore faced the rising demands for hand-to-hand money with equanimity. It was up to the

Treasury and the Bank of England to see that the money was forthcoming as needed.

The increased need for hand-to-hand money might have been met in either of two ways. The uncovered (fiduciary) issue of the Bank of England might have been increased, or currency notes might have been issued. As a matter of fact, the latter expedient was adopted. The joint stock banks obtained the needed cash by transferring part of their balances at the Bank of England to the currency notes account, receiving currency notes in exchange. The Treasury then borrowed these balances, substituting securities for them, and used them to make further payments which again built up the accounts of the joint stock banks at the Bank of England, thus giving them the means of obtaining more currency notes as needed.

It is thus apparent that England inflated her currency by the issuance of government credit notes, secured largely by government obligations and not redeemable in gold in practice. While the expansion of the check currency was doubtless the immediate force leading to the rise in price level, it was impossible for the increase in prices to continue without the subsequent increase in hand-to-hand money. Failure to increase the quantity of hand-to-hand money after prices had risen, on the other hand, would have disrupted the whole price system.

The extent of the inflation in England may be made clear by a few comparisons. The wholesale commodity price index⁵ rose from 108 (1913=100) in December 1914 to 313 at the peak of prices in April 1920. Currency notes outstanding rose from £38,478,000 at the end of the year 1914 to a high point of £361,911,000 at the close of August 1920. The total deposits of the joint stock banks of England and Wales increased from £895,561,000 at the end of 1914 to £1,961,527,000 at the end of 1920. There was also an increase in Bank of England notes outstanding from £36,139,000 to £132,851,000 during the same period; but

⁵ This is not a satisfactory measure of changes in the value of the pound as it represents changes in an index (*Statist*) covering prices of only 45 commodities at wholesale, but it is the best available. Changes shown in this index are exaggerated and the decline in the purchasing power of the pound — on a cost of living basis — was doubtless considerably less than that shown by the figures given.

this represented a substitution of notes for gold previously in circulation and was not, therefore, a contributory factor in the inflation.

England returned to the gold standard, in April 1925, at the old par of \$4.8665. The currency notes, which had been issued by the Treasury, remained in circulation and were made redeemable in gold bullion at the Bank of England. Beginning in 1920, England adopted a deflationary policy with respect to currency notes, the maximum fiduciary issue for a particular year being fixed at the figure representing the maximum actual fiduciary issue of the previous year. Under this plan the legal maximum issue for the years following 1920 was as follows: for 1921, £317,600,000; for 1922, £309,988,000; for 1923, £270,183,000; for 1924, £248-191,000; and for 1925, £248,145,000. By the Currency and Bank Notes Act of 1928, the currency notes were taken over by the Bank of England, the fiduciary issue of the Bank being increased from £19,750,000 to £260,000,000 to permit the absorption of the currency notes. Upon the return to gold redemption in 1925, the Bank of England was required to redeem its notes in gold bars of 400 ounces weight, but not in coin. Gold coin, which had had a wide currency in England prior to the War, accordingly did not reappear in circulation.

France.—The use of checks had not developed to any great extent in France and the inflation in that country accordingly took the form of an expansion of Bank of France notes to a large degree. The government, by arrangement with the Bank of France, borrowed heavily from the latter at the outbreak of the War, the Bank's advances to the government approaching 4,000,000,000 francs by the end of 1914. The government also borrowed from foreign countries and raised funds internally through the sale of "bons de la défense nationale," which were issued in small denominations for short terms and were popular investments both with the people and with the banks. Long-term issues were also floated upon occasion to consolidate and fund the short-term "bons de la défense nationale" and to reduce the government's indebtedness at the Bank of France. The Bank of France also made advances, secured by government obligations, to other banks and to business men.

Because of the wide use of bank notes in France, the advances of the Bank of France resulted in a rapid increase in its note issues. As the Bank suspended specie payments (i.e., redemption) on August 5, 1914, these notes were in the nature of government inconvertible paper money. The legal maximum issue of the Bank of France, which had been set at 6,800,000,000 francs at the outbreak of the War, was raised from time to time, to 43,000,000,000 francs in July 1920, in order to permit the increase in bank note issues to take place. As the franc depreciated in purchasing power, silver coins, which at first remained in circulation, became worth more as metal than as money and disappeared from circulation. To replace this necessary small change, chambers of commerce were permitted to issue small notes secured by notes of the Bank of France. This, however, did not contribute to the inflation, since the bank notes used as security were withdrawn from circulation.

In France the inflation was more extreme than in England. Wholesale prices, on a 1913 base, rose from 107 in October 1914 to 588 in April 1920. Note circulation of the Bank of France increased from 6,683,200,000 francs in July 1914 to 39,207,944,000 francs in September 1920, and advances by the Bank of France to the government rose from zero to 26,600,000,000 francs during the same period. The deposits of the Bank of France increased from 1,330,200,000 francs in July 1914 to 3,101,100,000 francs at the end of the year, but remained fairly stable thereafter. Deposits of three large joint stock banks, on the other hand, rose from 3,888,060,000 francs at the end of 1914 to 13,210,612,000 francs at the close of 1920.

France felt the effects of the world collapse in prices and her price level receded somewhat after reaching the peak mentioned in 1920. Subsequent inflation set in, however, the price index rising to 854 in July 1926. The government got the situation in hand just in time to avoid a complete collapse of the franc, and the price level flattened out in the latter part of the year. The franc was stabilized in the foreign exchange market by the device of exchanging Bank of France notes for foreign exchange, and vice versa, at a stipulated rate.

Finally, in June 1928, France returned to the gold standard. Under the law of 1928, the gold value of the franc, in terms of cents, was reduced from 19.3 cents to 3.92 cents. France therefore devalued her currency by about 80 per cent in returning to the gold standard. The law provided for the later resumption of free coinage on private account at a date to be announced by decree, until which time the Bank of France was required to redeem its notes in gold bullion.

Germany.—In Germany, as in France, the check currency was little used and Reichsbank notes became the chief instrument of inflation. It had been the plan of the government to finance the War chiefly by means of credit and this course was pursued as long as possible. Gold redemption was suspended by the Reichsbank and, since notes got into circulation largely through the discounting of bills for the Treasury by the Reichsbank, the latter's notes were virtually inconvertible government issues, although technically they remained bank notes.

In financing the War, the Treasury floated long-term bond issues at intervals and, to meet immediate needs, discounted Treasury bills with the Reichsbank in anticipation of receipts from the sale of bonds. After each bond flotation the government would sharply reduce its indebtedness at the Reichsbank, but not to the previous low level. Consequently, the figure for discounted Treasury obligations rose intermittently to a very large amount.

In addition to Reichsbank notes, the currency was augmented by issues of "Reichskassenscheine" or Treasury notes, and "Darlehnskassenscheine" or loan-bureau notes. The latter were issued by the loan bureaus, on the security of pledged commodities, to small financial institutions and individuals.

Although the inflation of the currency in Germany eventually terminated in a complete collapse, it was kept pretty well in hand during the actual period of the War. By the end of 1920, however, although the worst was yet to come, the inflation had proceeded further than in either France or England. The wholesale price level (1913=100) advanced from 125 in December 1914 to 234 in November 1918, the month in which the Armistice was signed. From

that height it mounted steadily to 1440 in December, 1920. Reichsbank notes in circulation rose from 2,909,422,000 marks in July 1914 to 18,609,873,000 marks in November 1918, and to 68,805,008,000 marks in December 1920. Meanwhile, total discounted bills of the Reichsbank (mostly commercial bills prior to the outbreak of the War, largely Treasury bills thereafter) increased from 2,081,075,000 marks to 22,133,458,000 marks and to 60,634,023,000 marks, respectively, on the same three dates. Treasury and loan-bureau notes combined increased from 180,000,000 marks in June 1914 to 10,465,600,000 marks at the end of 1918.

With the abandonment of price restrictions following the armistice, prices began to rise rapidly and, in the years following 1920, the inflation became increasingly violent. The evil effects of the inflation on the wage and salary earners of the country is shown in the accompanying table. The cost of living reached fabulous heights and, although wages and salaries increased, they did not keep pace with the ever-

TABLE XXIII

INDEXES OF WAGES, SALARIES AND
COST OF LIVING IN GERMANY (1914-1923)
(1913 = 100)

<i>Year and Month</i>	<i>Unskilled Labor</i>	<i>Skilled Labor</i>	<i>High Government, Railway, and University Officials</i>	<i>Cost of Living</i>
1914	100	100	100	250
1915	110	100	100	350
1916	130	120	110	450
1917	190	160	110	550
1918	310	260	150	550
1919	530	400	170	650
1920—March	670	500	200	956
June	1,010	760	370	1,081
Sept.	1,010	760	370	1,015
Dec.	1,010	760	380	1,158
1921—March	1,140	850	430	1,138
June	1,140	850	430	1,167
Sept.	1,340	990	490	1,374
Dec.	1,880	1,400	810	1,928
1922—March	2,030	1,510	830	2,897
June	4,620	3,390	1,600	4,147
Sept.	16,140	11,770	5,840	13,319
Dec.	55,390	40,000	22,780	68,506
1923—March	232,150	167,880	97,910	285,400
June	829,320	600,240	342,110	765,000
Sept.	1,660,000,000	1,200,000,000	690,000,000	1,500,000,000
Dec.	78,990,000,000,000	69,440,000,000,000	50,900,000,000,000	24,700,000,000,000

Source: Zahlen zur Geldenswertung in Deutschland, 1914-1923. Bearbeitet im Statistischen Reichsamte. 1925.

increasing living costs. Business men also suffered in the later stages of the inflation, as they found that they could not re-stock their inventories since prices had risen so rapidly.

The wholesale price level rose even more rapidly than the cost of living, reaching 126,160,000,000,000 in December 1923, while note issues of the Reichsbank amounted to 496,507,424,772,000,000,000 marks in the same month. This marked the collapse of the currency. A new temporary unit, known as the Rentenmark and secured by real property, was first introduced, to be succeeded shortly by the Reichsmark, redeemable in gold at the old value (23.82 cents). Paper marks of the inflation period were redeemable in the new units at the rate of 1,000,000,000,000 paper marks to 1 gold mark. Germany accordingly stabilized her currency on a gold basis by the method of repudiation.⁶

The value of money under an inconvertible paper currency. — It will be evident from the foregoing descriptions of the methods and degrees of inflation in England, France, and Germany during the Great War and the years just following that in countries having an irredeemable currency under war conditions there is a decided tendency for the price level and the quantity of money to mount rapidly together. This fact has led to the conclusion that the increase in the quantity of money is responsible for the increase in the price level, in accord with the statement of the quantity theory of money. Although there is a large element of truth in this conclusion, it will not do to disregard elements related to the demand for money which may, and often do, affect its value under such conditions.

The general conclusions of those who assert that the decrease in the value of money is a result of the increase in its quantity would be defended on the ground that the increase in the volume of money which is, of course, paid out by the government, would increase the money incomes of the public, thus leading to a bidding up of the prices of goods, the public's demand being added to that of the government. It would be admitted that the higher prices

⁶ The data and much of the factual material of this and the two preceding sections have been obtained from J. P. Young, *European Currency and Finance*, I. Figures for Treasury and loan-bureau notes after 1918 are not given in this report.

might stimulate the production of goods and that the increase in goods would tend to offset some, if not all, of the increase in the quantity of money. But, after the productive system of the country was going at full blast (a situation which occurs fairly quickly after the beginning of a war), increases in the quantity of money would simply increase money incomes without further stimulation of production, and, the entire increase in purchasing power being offered against the practically fixed output of goods, the price level would rise in proportion to the increase in the amount of money.

The preceding argument holds good under the assumptions that the public has confidence in the government, being hence quite content to accept the money issued, and that the public continues to hold the same proportion of its real income in the form of money as had formerly been the case. Actually, these assumptions are not justified under conditions of the type here under discussion. Even before the inflation has proceeded to any great lengths, before there is any real loss of confidence in the government, it is quite likely that individuals will decrease their cash-balances in relation to their real income. In a period of great industrial activity, with full employment of labor, people tend to prefer goods to cash, even going into debt to obtain them before the income to pay for them is at hand. Or if, in time of war, they reduce their consumption for patriotic reasons, they are still likely to hold less cash than usual, being spurred on to purchase government bonds to assist the prosecution of the war. If some of the money which has formerly been held as cash balances is invested in government bonds, it is, of course, immediately expended by the government in the purchase of war materials and so has the same effect on prices as though expended by the public directly. We may be quite certain, then, that there will be a decrease in the demand for money to hold which will exert an upward influence on prices in addition to that resulting from the increase in the quantity of money.

If the inflation becomes extreme, the demand for money to hold will doubtless decrease even further. True, since the irredeemable paper money is legal tender, the public

is practically forced to accept it, but the people will get rid of the notes at the earliest possible opportunity in exchange for goods since the notes will be expected to depreciate in value if held only for a few days. Moreover, as Mr. Robertson has pointed out, the transaction price level will tend to rise even more rapidly than the income price level since manufacturers and traders, looking forward to a continued increase in paper money, will fix their prices on the basis of the amount of money which is expected to be issued as well as on the amount already in existence.⁷

In circumstances of this sort, the rise in prices is more than in proportion to the increase in the quantity of money and itself makes necessary the issuance of additional notes, for the rapid rise in prices means that taxes and receipts from bond issues fail to cover the necessary expenditures so that more money must be printed to meet the requirements of the Treasury. The further increase in the quantity of money in turn diminishes the demand once more, and the cycle is repeated until the whole system collapses.

It is also thought at times that the value of a given country's currency, under a régime of inconvertible paper money, is determined entirely independently of the value of gold. This, however, is not usually the case. Dr. W. C. Mitchell, in an illuminating study of the Civil War period in the United States, having charted the movements of commodity prices and the premium on gold,⁸ concludes his discussion of their relationship as follows: "In all these movements from 1862 to 1865 the lines representing the premium and the median of relative prices correspond so well that one cannot resist the conclusion that these changes are mainly due to a common cause, which can hardly be other than the varying esteem in which the notes of the government that constituted the standard money were held." That confidence or esteem was an important factor in determining the price level is definitely proved by the fact that "in the six months following the passage of the third legal tender

⁷ D. H. Robertson, *Money*, Revised Edition, 1929, pp. 128-129. Mr. Robertson has evolved an ingenious equation to represent this state of affairs, namely, $P = (M + M') V/T$, where M' is considered as "latent money not yet created."

⁸ Which was dealt in on the market during this period.

⁹ *A History of the Greenbacks*, p. 279.

act [of the Civil War], when notes were being issued in accordance with its provisions, the value of the currency appreciated in a marked degree.”¹⁰ Such movements of the price level, in the face of inverse changes in the quantity of money, are to be explained by increased confidence in future gold redemption by the government. They may also be explained in terms of an increase in cash-balances which are held either by speculators, who hope for an increase in value, or by the public generally as a result of increased confidence. The fact that prices in greenbacks were fixed during the Civil War in reference to the gold premium, however, indicates that the value of gold still played a part in determining the value of the irredeemable currency.

We shall have to conclude that demand plays an important part in determining the value of inconvertible paper money under war conditions, especially when the inflation is extreme. The quantity theory is a theory of the normal value of money, however, and we should scarcely expect it to be valid under the abnormal conditions which surround the prosecution of a war. If an irredeemable paper currency were carefully managed and restricted, the conditions of demand would be similar to those which prevail under the gold standard, but governments are prone to issue excessive quantities of money when they cease to redeem it in gold, with the result that the purchasing power of the money unit tends to depreciate, although not always in proportion to the quantity of money issued.

Varying degrees of depreciation.—Before leaving the subject of inconvertible paper money, it will be desirable to find out the reasons for the different degrees of inflation which were attained in England, France, and Germany between 1914 and 1920. The chief reason for the fact that inflation proceeded to greater heights in France and Germany than in Great Britain is to be found in the failure of the former countries to introduce comprehensive tax programs, while England taxed her subjects heavily. If the entire cost of a war could be met through taxation, there would be no reason for any permanent depreciation in the value of money, since the money obtained by the government

¹⁰ *Ibid.*, p. 208.

would be taken from the public, the total purchasing power in terms of money remaining unchanged. Aside from the possible decreases in cash-balances, there would be no force exerting an upward pressure on the general level of prices. The same would be true if the money used by the government were obtained from the sale of bonds in the market in competition with corporate issues, provided that the bonds were purchased from real savings. When bonds are issued in excess of savings, however, and are purchased by means of bank borrowing, additional monetary purchasing power is created and inflation tends to ensue. When the government both borrows directly at the central bank and sells large issues of bonds as well, the creation of credit money tends to be still greater and the inflation more severe.

In the Great War, France was poorly equipped to raise large sums by taxation and was compelled to resort to borrowing at the Bank of France and to the sale of bonds. Germany openly planned to finance the War by borrowing and only imposed taxes when it was too late to prevent continued and severe inflation. The payments which Germany had to meet after the War combined with the effects of the occupation of the Ruhr by the French prevented Germany from keeping the inflation within any controllable bounds.

Inflation under the gold standard.—The purchasing power of the dollar depreciated markedly in the United States during the War and post-War expansion in spite of the fact that the gold standard was maintained during most of this period.¹¹ Although gold redemption was legally maintained,¹² the rise in the price level resulted from the creation of bank credit money on the basis of government borrowing. In bare outline, the Treasury floated bond issues far in excess of the possible real savings of the public and at artificially low interest rates. Many of the bonds were accordingly purchased by individuals who, in order to pay for the bonds, borrowed at the banks, putting up the bonds as security. The banks themselves also bought large

¹¹ The United States was, strictly speaking, off the gold standard from the fall of 1917 until the summer of 1919 because of the embargo on gold exports during that period.

¹² Obstacles were, however, placed in the way of easy redemption of Federal Reserve notes in gold.

amounts of these bonds. The government received immediate credit on the books of the banks for the amount of the bonds purchased and checked against these deposits to pay for war purchases. When the banks were fully loaned up, they discounted paper secured by government obligations at the Reserve banks, thus building up their reserves or enabling them to obtain Federal Reserve notes to meet the increasing requirements of customers for hand-to-hand money.

As in England, the increase in the check currency gave an initial upward thrust to prices, the subsequent increase in Federal Reserve notes being necessary to meet the added demands for hand-to-hand money which the higher prices entailed. The final effect of the United States Treasury policy was to create a considerable amount of purchasing power for the government in excess of the monetary purchasing power of the public. The natural result was to raise the price level since the output of goods did not increase materially after 1917.¹³ That the United States came very close to remaining on the gold standard was a result of the fact that the Reserve banks had a sufficient amount of gold for this purpose. The belligerent countries of Europe were not in so fortunate a position. Taxes in the United States, however, were very greatly increased. Had less of the cost of prosecuting the War been met by taxation, it is probable that the United States would have suspended the gold standard for a longer period than the gold export embargo was in force.

¹³ Some additional details concerning this period will be found in Chapter XXXIV.

CHAPTER XXIX

INTERNATIONAL EXCHANGE AND THE VALUE OF MONEY

Introduction.—The material presented in the last four chapters has had to do largely with the application of monetary principles within a single country. Before we can arrive at a full understanding of these principles, however, it will be necessary to apply them to the monetary relationships which exist among different countries. The banking aspects of foreign exchange, including a description of the mechanics of foreign payments, exchange rates and gold shipments, have already been considered (Chapters XV and XVI) and need not be repeated. The present chapter will accordingly be concerned with the broader, monetary aspects of international exchange. We shall first consider the relations existing between the monetary units of countries which are not on the gold, or other metallic, standard, after which attention will be directed to similar relations under an international gold standard.

THE PURCHASING POWER PARITY THEORY

Determination of rates under paper standards.—In the short run, the rate of exchange is determined by the relation between the demand for and the supply of funds abroad. If the demand for funds abroad on the part of Americans who have debts to pay in foreign countries is in excess of the supply of such funds at the existing rate of exchange, the rate will have to rise to a point which will equalize these two forces. On the other hand, if the supply of funds abroad is in excess of the demand for them at a given rate, the rate will fall until the demand and supply are equalized. More fundamental, however, are the factors which go to determine the forces of supply and demand, and of these one of the most important is the relative purchasing power of the

monetary units of any two countries. The reason that people want the money of a foreign country is because they have payments to make there, and if a unit of a certain foreign money will buy, on the average, some five times as many goods and services as a unit of domestic money, people will be willing to give, on the average, five units of domestic money for one unit of foreign. For purposes of illustration, let us assume that the United States and England trade only with each other and that neither country permits the export of gold. Assume further that there is absolute freedom of trade between the two countries with no hindrances in the way of tariffs, embargoes, and the like, with the exception of the embargo on gold. Now let us suppose that trade between the two nations is in a state of equilibrium and that the English pound will purchase 5 times as much, on the average, in England as the dollar will in the United States. The rate of exchange which would tend to exist in New York on London would be \$5.00; i.e., \$5.00 would tend to be the price charged by the New York bankers for the right to claim one pound in London. This may be termed the par of exchange between New York and London, or it may be designated the normal rate of exchange, since it is the rate which is always tending to prevail in view of the existing conditions. Any deviation of the actual rate from par, or from the normal rate, would set at work forces which would tend to bring the actual rate back to normal.

Automatic forces tend to prevent wide deviations of the rate from par. — Under the conditions assumed, it would be found that certain goods could be produced more cheaply in England than in the United States and Americans would buy those goods from England. Other goods could be produced more cheaply in the United States, and Englishmen would purchase those goods in this country. Trade would take place between the two countries with a normal rate of exchange of \$5.00 to one pound. The actual day-to-day rate, while seldom or never coinciding with the normal rate, cannot, it has been said, depart far from it. Suppose the actual rate to be \$5.20 per pound instead of \$5.00. Such a rate would tend to make the importation of goods from

England less profitable than the normal rate, because £1000 worth of English goods would cost the American importer \$5200 when he came to buy a claim on an English bank to pay for them, instead of \$5000. Conversely, exports to England would be somewhat more profitable to English importers because they could buy claims to dollars to pay for the goods for less, in pounds, than if a rate of \$5.00 to the pound existed. Looked at from the point of view of the United States, imports would tend to decrease and exports to increase. The result would be a decrease in the demand for claims on England by American importers and an increase in the supply of such claims offered to the foreign exchange bankers by American exporters. In other words, the foreign exchange bankers' stock in trade, funds in England, would become larger, while the demand for this stock at the higher rate would decrease. Supply would exceed demand at \$5.20 and the competition of the foreign exchange bankers would drive the price of claims to funds in England to a lower level. A fall in the rate of exchange below \$5.00, on the other hand, would have just the opposite effect and the rate would tend to rise.

Effect of changes in relative purchasing power.—It should now be clear that the forces governing the short-run rate of exchange are those of the demand for and supply of funds abroad, and that, so long as the monetary units of the two countries undergo no marked change in purchasing power, the action of these forces will prevent the actual rate from diverging very far from the par or normal rate which represents relative purchasing power. It is quite possible, however, that some change may occur in the purchasing power of one or the other of these units of money which will destroy the relationship of 5 to 1 in their purchasing powers. Let us suppose, for example, that the United States greatly increases the quantity of money issued and that prices rise so that they are double their former level, while the price level in England remains unchanged. In such circumstances, the old price relationships that had been worked out would be entirely upset. Practically nothing could be profitably purchased by Englishmen in the United States because of the tremendous increase in prices in the latter country, while the

profit to be derived by importing goods into the United States from England would be tremendous. Trade between the two countries—if continued—would be all in one direction, from England to the United States. The funds which American foreign exchange bankers held in England would become a fixed supply good except for such amounts as they might be able to borrow for the time being from their English correspondents, while the demand for funds in England on the part of American importers would greatly increase. The bidding of the latter for the available supply of funds in England would drive the price of these funds sharply upward in terms of dollars and this rise in the rate of exchange on England would continue until the *exceptional* profit to be derived from importing operations had disappeared. At this time, another equilibrium would be established with the normal rate of exchange in close proximity to \$10.00 per pound. After this equilibrium had been reached, it would again be possible for the actual rate of exchange to fluctuate somewhat above and below the new par, with the forces of the demand for and the supply of funds in England operating to bring it back to this point every time it deviated very far therefrom.

In the illustration chosen it was assumed that no gold shipments took place and that a sudden doubling of the price level occurred in one of the countries. The first assumption is not in accord with normal trade and financial relationships between countries, but such conditions did exist for a number of years during and after the Great War in several of the participating countries. As to the second assumption, that the price level suddenly doubled in one country, this could scarcely occur in actual practice, but the assumed conditions have been exaggerated for the purpose of throwing into sharp relief the main point, namely, that *the normal rate of exchange between any two countries tends to settle at a point which expresses the relative purchasing power of the money of those countries*. This is the purchasing power parity theory of exchange rates, as first elaborated by the distinguished Swedish economist Cassel.¹ The theory is essentially sound as a theory of normal exchange rates, but,

¹ In *Money and Foreign Exchange after 1914*.

as set forth above, is subject to several limitations to which attention must now be directed.

Limitations on the theory of purchasing power parity.

— The purchasing power parity theory, if it is to be considered sound, must postulate an *equal rise in the prices of all goods* when the price level of any country engaged in foreign trade changes. If the prices of goods rise in varying degrees, the old equilibrium will be upset in the trade relations between the two countries, and a doubling of the price level of one of the countries may not result in an exactly proportional alteration in the normal rate of exchange between the two. As a theory of normal exchange rates, no criticism can be directed against it on this score. A rise in prices brought about by a purely monetary change cannot permanently affect the relative productivity of the two nations (unless one of them had too little money, from the standpoint of productive efficiency, to begin with), and it is on this productivity that their trade relations are based. But as a method of explaining the varying exchange rates which resulted from the fiat money orgy of the Great War, it is not highly satisfactory. The old price relationships were entirely destroyed in many cases by the increase in price levels, and the assumption that all prices rise in equal degree during such a period is so far from the facts that the working out of the theory with a high degree of precision is practically out of the question.

Another qualification which must be taken into account results from the various *tariff barriers and embargoes* which exist in practice and which interfere with the freedom of trade assumed by the theory. Any marked interference with imports because of a high protective tariff in one country can have the effect only of limiting the purchases of that country in other countries and thus of interfering with the natural equilibrium established by the relative price levels of the two countries. Embargoes also have the effect of limiting trade and causing the rate of exchange to deviate from the normal as represented by the relative purchasing powers of the money units of the two countries.

Purchasing power in a limited sense. — It should be noted, also, that purchasing power in a very general sense cannot be

meant if the theory is to be considered sound, even when the other postulated conditions are fulfilled. There are many goods and services which do not enter into foreign trade at all, and about the prices of which the people of foreign countries have no concern. Bulky materials which are perishable or which have such low value that they cannot stand shipping charges, wages, salaries, professional fees, land, etc., are important items in determining the real purchasing power of a country's money, yet changes in the price of these goods and services would scarcely affect the valuation which another people would put upon the money of the country in which these prices had changed. In a sense, this comes under the head of the assumption that all prices must rise together in the same proportion. Cassel, however, evidently had no such comprehensive notion of purchasing power when he propounded his theory, and the fact that any great short-run change in the general price level does result in a marked change in the relationships which exist between the prices of goods, services, securities, etc., is a marked drawback to the satisfactory application of the theory when *general* price levels are used. There is a sort of natural limitation on the types of goods and services which can be traded in between countries which has a similar effect, differing only in degree, to those restrictions imposed by the erection of tariff barriers and embargoes. It is granted that tariffs and embargoes interfere with the working out of the theory in practice. It must be likewise admitted that these natural limitations interfere with its practical application if the term purchasing power is used in any general sense. If purchasing power, on the other hand, is deemed to apply only to those goods and services which are, or may be, traded in between countries, the theory attains greater validity.

The theory in relation to gold.—In the discussion of the theory of purchasing power parity thus far, the assumption has been that gold is not used in payments between countries. When the majority of the world's trading countries are on the gold standard, as is normally the case, this is, of course, decidedly out of line with the facts. The existence of an international gold standard, however, does not destroy the validity of the purchasing power parity theory. It still

holds as the fundamental explanation of exchange rates when both of two countries are on the gold standard, for the value of gold, which we have taken to be its general purchasing power, cannot vary greatly or for long between two localities without resulting in a flow of gold from the point where it is less valuable (has a smaller purchasing power) to the place where its value (purchasing power) is greater. Some variation there may be as a result of transportation costs, but the difference in value will not be greater than the amount necessary to move the gold from one place to the other. The movement of gold will continue until its value (purchasing power) is equalized in the two countries. Even this statement, obvious as it may seem, cannot be made without some qualification. The prices of materials and services which are of such a nature that they cannot or will not be transported to another country must logically enter into the determination of the value of the standard in any given country. These prices, if they change, may not affect other prices in exactly the same degree, and the result will be a change in the general price level of the country in question without a corresponding change in the price level of the goods and services which enter into foreign trade. Yet it will be the change in the price level of goods, and especially of those goods which enter into foreign trade, which will determine whether or not gold will be shipped out of the country.

This qualification is not so important as it might seem at first glance from the point of view of a theory of normal exchange rates. Under any level of prices, the prices of different goods and services are always tending toward the prices which represent the social significances of those goods and services as measured by their contributions to the satisfaction of human economic wants. A mere monetary change, *per se*, cannot change these fundamental relationships. It may throw them out of adjustment for a time, and it may even affect the forces which determine these social significances, but, barring the latter result, the prices of all goods and services will always be *tending* toward the old relationships which measure social significance and cost. It is justifiable, then, to say that the normal value of gold

money in any one country, as represented by general purchasing power, cannot diverge by more than the cost of transportation (and possible loss of interest) from its value in any other country with which extended trade relations are maintained.

From the short-run standpoint, however, it is necessary to take account of such maladjustments between price groups as those we have mentioned, and to consider the value of gold money as determined by its purchasing power over those goods which enter into foreign trade and such services and securities as are dealt in between countries as far as international gold movements are concerned. Since it is the short-run forces which actually bring about the movement of gold from one country to another, it is naturally important that we consider them in connection with the subject of gold movements, a subject which will be discussed at some length in the following section.

PRINCIPLES GOVERNING GOLD MOVEMENTS

Disproportionate changes in price levels.—Gold movements, resulting as they do from the self-interest of the foreign exchange bankers, are determined by the relation between the demand for and the supply of funds abroad, and we have seen that the most important forces affecting the supply of and demand for foreign funds are those connected with the exportation and importation of goods.² It thus happens that changes in prices play an important part in the determination of gold movements, for if prices rise in one country while remaining practically unchanged in other countries, exports from that country will tend to fall off—diminishing the supply of funds abroad—and imports will tend to increase—increasing the demand for funds abroad. This will cause the rates of exchange on foreign countries to rise to points sufficiently high to make the export of gold profitable, whereupon such export will ordinarily take place. This may be summed up in the form of a principle to the effect that *gold tends to flow out of a country where the*

² Goods must here be understood to include all goods and services which enter into foreign trade.

price level of foreign commodities has risen out of proportion to the rise in the corresponding price levels of other countries with which it has trade relations.

Gold outflow will not continue indefinitely.—There is no need to fear, however, that such an outflow of gold will continue indefinitely, for the loss of gold itself sets up conditions which will automatically remedy the situation. It has already been shown that a rising rate of exchange brings into action forces which tend to bring it back to par by increasing the profitability of exporting goods and decreasing the profitability of importing goods. But if the rate rises to the point where gold exports become profitable and actually take place, still other forces are set to work which will stop the outflow of gold sooner or later.

(1) The shipments of gold out of the country will result in a decrease in bank reserves and a withdrawal of funds from the short-term loan markets—the call loan market, the acceptance market, etc.—where the surplus funds of the banks are ordinarily invested. (2) This will raise short-term money rates (i.e., interest and discount rates) sharply. (3) The higher money rates will attract short-term funds from other countries where rates are lower, or at least will prevent the further withdrawal of such funds by foreign countries, and (4) this will cause the rate of exchange to fall and stop the outflow of gold. The high money rates will also, usually, tend to decrease speculative buying of securities and staple products which is largely conducted on borrowed funds. This tends to result in a fall in the prices of securities and staples, thus encouraging foreign buying of these items. The foreign purchases of securities and staples increase the supply of funds abroad and add to the forces tending to lower the rate of exchange below the gold export point.³ If the inflow of foreign funds and the purchase of securities and staples by foreigners proceed to sufficient lengths, the rate of exchange will fall to a point where gold will be imported. This will not always occur, it is true, but

³ In times of speculative mania, such as occurred in the United States in 1929, prices of securities may continue to rise for a time in spite of the high money rates. But if the speculative fever spreads to foreign countries, these securities will be purchased by foreigners in spite of the high prices. In 1929, the United States imported large amounts of gold at a time when security prices were rising rapidly.

that the outward flow of gold will be stopped is fairly certain.

To assume an extreme case, however, let us suppose that the above forces are not sufficient to bring about a cessation of the gold outflow and that the yellow metal continues to leave the country. Eventually, bank reserves will be depleted to the point where a general deflation of bank credit will be necessary. When this time arrives, there will result a general fall of prices which will continue until it is no longer profitable to export gold and the outflow will cease. A steady drain of such proportions is not at all likely to occur in practice, as the other forces which have been mentioned would stop the outflow, in all probability, before it had attained such magnitude, but it has been discussed for the purpose of showing that *there is no danger of a continual loss of gold from a country of such duration as to result in a complete drawing away of its monetary stock.*⁴

World gold stock distributes itself according to need.—As following from the preceding observations, a generalization may be formulated to the effect that *the monetary stock of gold tends to distribute itself among the gold standard countries in proportion to the need for it.* This is, of course, a long-run principle. If the economic productivity of a given country is on the wane and the amount of monetary gold remains unchanged, the price level will rise and gold will flow out of the country, but, under the conditions mentioned, the old stock of gold is larger than necessary to carry on the diminished volume of trade. On the other hand, if the productivity of a country is rapidly increasing without some increase in the monetary gold of the country, prices will tend to fall and additional gold will be attracted in that direction. Methods of economizing in the use of gold, such as the development of the check system, etc., may prevent gold movements into the country which would otherwise take place, but, after all, the country in which such

⁴ It is not necessary to go through the reactions which would prevent a country from importing gold continuously until its monetary gold stock was entirely out of proportion to its needs. In general, they would be just the opposite of those which prevent an undue export of gold. However, the fact that the business community may refuse to make use of the imported gold for spending purposes (or as a basis for credit expansion) may prevent prices from rising as they otherwise would, and so allow more gold to be imported at times than is at all necessary or desirable.

economies have occurred has less need for gold than other countries which have not adopted the more efficient methods of exchange, so that the fact that gold does not move into such a country so rapidly as might be expected is not contradictory to the statement of this principle.

Net gold movements referred to.—It should be understood that the term *gold movements*, as it has been used in the preceding discussion, refers to net movements of the metal. If the United States imports \$21,000,000 in gold in a certain month from some countries and exports \$10,000,000 in gold to other countries during the same month, the net gold movement is \$11,000,000 into the United States for the month in question. In considering any long-time distribution of monetary gold among the countries of the world, a year is the shortest period which should be used in the calculation of net gold movements for the reason that many imports and exports of gold are seasonal in nature and occur at different times of the year. Thus, prior to the Great War, there was a customary excess of goods exports to European countries in the fall of the year which ordinarily resulted in a net inflow of gold into the United States during those months, while, in the spring of the year, imports of goods tended to be in excess of exports and gold frequently left the country in significant amounts. In so far as the spring outflow of gold was offset by the autumn inflow, there was no permanent effect on the stock of gold of the United States. Such movements of gold were important in many respects, but not in effecting a permanent redistribution of the world's monetary gold stock, for they took place when the relative price levels of the United States and other countries had remained practically unchanged; they were purely seasonal movements; and they offset each other almost entirely.

Other tendencies.—One or two other tendencies should be mentioned before this survey of gold movements is brought to a close. *If any given country issues any considerable quantity of legal tender credit money, gold tends to be displaced and leave the country.* This occurs because of the inelasticity of government legal tender credit money. If the volume of trade decreases, such issues of paper or

credit money fail to contract, since there is no particular motive for redeeming it. The quantity of money then becomes excessive and gold is shipped out of the country, as it is the only acceptable means of international payment, while the legal tender credit money, which cannot be used to pay foreign balances, remains in the domestic monetary stock and takes the place of the exported gold. This is to be distinguished from an increase in the quantity of credit money through the development of a check currency. To a certain extent, the latter may be said to prevent gold from flowing into the country to the degree that it otherwise would, and it does this by keeping the price level from falling, but, as it contracts somewhat in times of decreased business activity, it is seldom responsible for a displacement of gold such as occurs when a redundancy of government legal tender credit money is brought into existence.

Barring unduly great and lasting changes in the price level of a given country as compared with those of other nations, *the exports and imports of gold over any long period of time tend to counterbalance each other*, so that there is no material net change in its gold supply. Exceptions must be made, however, of countries which produce no gold within their limits and those which produce an amount of gold greatly in excess of their own monetary needs. There will tend to be a more or less continuous net export of gold from the latter countries and a net import of gold into the countries of the former group. In the large gold-producing countries, prices will tend to be high and the rate of exchange will tend to be at the gold export point a good deal of the time. Conversely, in the countries which produce no gold, prices will tend to be lower and these countries will therefore tend to import more gold than they export in the long run. This is really a part of the general principle that the gold stock tends to be distributed in accordance with the needs of the different gold standard countries, and need not detain us further.

THE ARTIFICIAL CONTROL OF GOLD MOVEMENTS

The necessity for artificial control.—Up to this point the discussion has centered around the largely automatic move-

ments of gold from one country to another, and its distribution among different countries. While, as has been shown, there is no danger of the complete loss of a country's monetary gold stock through exportation and while, in the long run, a country may anticipate retaining or acquiring as much gold as it really needs in relation to the needs of other countries, it is nevertheless true upon occasion that such a loss of gold as would take place under the working of automatic forces would disrupt the smooth working of a given country's credit system and lead to serious immediate consequences. In such circumstances, at least a measure of artificial control over gold movement is desirable.

Present powers of the Federal Reserve banks.—This fact was recognized in the United States at the time of the passage of the Federal Reserve Act with the result that the act conferred upon the Federal Reserve banks certain powers which would provide them with some control over gold movements. The section of the act which regulates the open-market operations of the Reserve banks provides that "every Federal Reserve bank shall have the power :

"(a) To deal in gold coin or bullion at home or abroad, to make loans thereon, exchange Federal Reserve notes for gold, gold coin, or gold certificates, and to contract for loans of gold coin or bullion, giving therefor, when necessary, acceptable security, including the hypothecation of United States bonds or other securities which Federal Reserve banks are authorized to hold ;

"(b) To buy and sell, at home or abroad, bonds and notes of the United States . . ."—*Federal Reserve Act*. Sec. 14.⁵

The usefulness of such powers, when placed in the hands of central banking institutions like the Federal Reserve banks, which are not operated primarily for profit, is beyond question. Gold may be purchased abroad and imported at a loss if such action is necessary to protect the reserve position of these banks. Or, if it is not desired actually to import gold, but merely to prevent its exportation, it is possible either to buy or borrow gold abroad and have it credited to the foreign accounts of the Reserve banks. This constitutes a supply of funds abroad which may then be sold to foreign exchange

⁵ These powers were restricted by the Gold Reserve Act of 1934.

bankers at a rate sufficiently low to prevent them from drawing out gold from the Reserve banks for export.

In a country which has an international market for short-time loans, the regulation of the rate of discount by the central bank may be of importance in preventing an outflow of gold from the country. By selling securities in the market and raising its rate of discount, the central bank may frequently bring about a higher rate in the discount market, and a high rate in the latter market tends to make it more profitable for foreign bankers to allow their funds to remain there to be loaned out at the high rate than to withdraw them in the form of gold to their own countries. It is, of course, essential that foreign bankers shall have funds invested or on deposit in the center in question before the use of the discount rate for this purpose will prove effective. The Bank of England has always been in a favorable position in this respect, for London has held the position of world financial center for many years. This means that bankers from all parts of the world maintain deposit accounts in London, so that an increase in the possible return to be obtained from leaving these deposits in London has the effect of preventing, for a time, some of the exports of gold which would otherwise take place.

Control of gold movements in the United States.—The position of the United States in this regard has undergone some marked changes in comparatively recent years. Before the Great War, not only was there no central banking structure in this country, but very few foreign deposits as well. American exporters and importers, as contrasted with English houses engaged in foreign trade, had to take the initiative in making both collections for goods sold and payments for goods bought. Further, there was no highly developed open market for commercial paper in New York in which foreigners could readily lend funds if they had them available in this country for that purpose. As a consequence, high money rates in the New York market did not offer the same obstruction to gold exports that similar rates in London were likely to do.

After the establishment of the Federal Reserve system, there was no opportunity to use the powers bestowed on the

Federal Reserve banks for the purpose of manipulating gold movements throughout the War period. Since the crisis and depression of 1920–1922, however, the Reserve banks have attempted to exert some control over gold movements, although their efforts have been largely in the way of preventing excessive imports of gold and thus aiding in the reestablishment of the gold standard by European countries. It is probable, for example, that the action of the Reserve banks in creating exceedingly easy money conditions in the New York market in 1924 was with an eye to preventing further gold imports from England, thus making it easier for that country to arrange for its return to the gold standard. Again, in 1927, the Reserve banks purchased \$60,000,000 of gold which was held temporarily in London and thus could not be imported into this country. Later in the year, through heavy purchases of securities in the open market and the lowering of their discount rates, the Reserve institutions created extremely easy money conditions in New York with the result that there was a net export of gold from the country at a time of year when imports of the metal are most likely to occur.⁶ The Reserve banks have also participated in extending gold loans at various times to countries that were stabilizing their currencies and returning to a gold basis. These are abnormal conditions, it is true, for the central bank is usually more concerned to prevent an outflow than an inflow of gold. Nevertheless, there is no reason for thinking that the Reserve banks will not be able to exert a significant amount of control over gold exports when the time arrives at which such pressure is needed. The post-war period has seen a large increase in the number and size of foreign balances which are maintained in New York banks, as well as the development of a substantial market for bankers' acceptances, and some ability to control future gold exports through the manipulation of discount rates by the Reserve banks—especially the Federal Reserve Bank of New York—seems probable. At all events, it is certain that the Federal Reserve banks have been endowed with adequate powers to protect their reserve positions and the safety of the credit structure by prevent-

⁶ For a description of the gold policy of the Federal Reserve banks during 1927, see the *Annual Report of the Federal Reserve Board*, 1927, pp. 9-11.

ing the immediate loss of unduly large quantities of gold.

Desirability of artificial control.—In passing judgment on the desirability of artificial control of gold movements, it is necessary to analyse the conditions under which control is exerted and the purpose of the measures employed. In general, the operation of the international gold standard, to be satisfactory, should be automatic and reciprocal. That is, the loss of gold from one country should exert a contracting effect on that country's credit structure and put an end to the gold outflow as already described, while the inflow of gold to the receiving country should exert an expansive effect which would also operate to stop or reverse the flow of gold.

When the gold movement is the result of natural economic and commercial forces, any artificial control should be in the nature of measures to enhance the natural effect of the loss or gain of gold, as the case may be. For example, if the United States was to lose gold under the circumstances described, the proper action for the Federal Reserve banks to take would be to raise discount rates and sell securities in the open market. When member banks draw down their accounts at the Federal Reserve bank to obtain gold for export, their reserves are reduced and the market is automatically tightened. If, in addition, the Reserve banks sell securities, member banks' reserves are reduced still further and the natural tightening effect of the gold export is thereby enhanced. Conversely, when gold is being imported, the Reserve banks should lower rates and buy open market securities to heighten the natural easing effect of the gold imports. Artificial action of this sort, by enhancing the natural effects of gold movements, tends to hasten the readjustment and put a stop to the flow of gold.

Upon occasion, however, in fact rather frequently in the post-war period, gold movements of large magnitude have resulted from the shifting of balances from one center to another purely because of a loss of confidence in the center losing the funds. The loss of some \$700,000,000 in gold from the United States in the six weeks following England's departure from the gold standard in 1931 is a case in point. Such movements are not the result of normal economic forces and require different treatment. In 1931, for example, the

Reserve banks bought bills in the open market in the amount of approximately \$400,000,000, which offset a corresponding loss of gold as far as member bank reserves were concerned.

It may be concluded, then, that central banks should give effect to normal commercial movements of gold, but, if in a position to do so, should offset—at least in part—abnormal movements resulting from hysteria and loss of confidence.

DEVALUATION AND GOLD MOVEMENTS

Exchange effects.—It has been explained that, when the world's leading countries are on the gold standard, price levels are forced into equilibrium with each other through gold movements from one country to another. If, after such an equilibrium has been attained, one country reduces the weight of gold in its monetary unit, that country's currency is said to be undervalued in relation to the currencies of the other gold standard countries, and gold will tend to flow into the country with the undervalued currency.

An illustration of this type of gold movement is afforded by the experience of the United States after the dollar was devalued in January 1934. Prior to the inauguration of President Roosevelt, the franc was worth 3.92 cents, in terms of the old dollar. After the devaluation, when the government stood ready to buy and, under certain conditions, sell gold at \$35.00 per ounce, the par of exchange on France was shifted to 6.66 cents. At the old par, an American-made automobile priced at \$1000 would cost a French buyer roughly 25,500 francs. At the new par, the same \$1000 automobile could be obtained for about 15,000 francs. Clearly, it would be highly desirable from the French buyer's point of view to purchase American goods after the devaluation.

It is also clear that goods imported into the United States from France will advance in price. An article priced at 2500 francs would have cost about \$100 at the old par of exchange, but would be worth approximately \$170 at the new par. As a result, imports from France tend to fall off, while exports to France are correspondingly stimulated. The effect of this is to start a flow of gold from France to the United States.

Extent of gold movement. — The extent of a gold movement occurring as a result of devaluation depends upon two factors, provided that no artificial restrictions are placed on the movement of goods and funds from one country to the other. These two factors are, first, the extent to and rapidity with which prices rise in the country where the currency has been devalued, and, second, the extent to and rapidity with which prices fall in other gold standard countries. Obviously, if the prices of automobiles and other goods exported from the United States had immediately risen upon devaluation by 70 per cent, the cost in francs would have been the same after the devaluation as before. Similarly, if the prices of French goods had receded 40.94 per cent, the cost of such goods in dollars would not have increased.

As a matter of fact, American prices did not rise by any large percentage in 1934, nor did French prices fall by anything like 40.94 per cent. Consequently, the United States imported over \$260,000,000 of the new weight from France in the course of the year, and over \$1,000,000,000 from all countries, a movement which continued into 1937.

This explains why depreciation or devaluation of the currency on the part of a number of countries puts pressure to deflate on other countries which retain their gold units unchanged. Even if the latter have ample reserves, exports to foreign countries will fall off and unless or until they can lower their prices to compete with foreign countries, they will not regain their export markets. Eventually, also, unless they rigidly restrict imports, they will be forced to depart from the gold standard entirely.

Countries retaining their former gold units of course have the option of devaluing these units in order to bring them into line with other currencies and so avoid deflation. The practical difficulty here, however, is that there is usually a tendency to undervalue their currencies under such circumstances in order to obtain an exchange benefit. This may easily lead to competitive currency depreciation throughout the world, which can only end in complete demoralization.

Post-war gold movements abnormal. — Between 1925 and 1928, most of the great countries of the world returned to the gold standard after having been on an irredeemable

paper money basis since the outbreak of the War. This standard was generally retained until 1931, after which there was again a general departure from gold involving all but a few countries. The operation of the gold standard during this period, however, was anything but normal. In discussing the factors determining the world value of gold in the final section of this chapter, therefore, we shall revert to the pre-war period when conditions were less chaotic, although reference will be made to some of these abnormal conditions on the world value of gold.

THE WORLD VALUE OF GOLD

The world demand for gold.— It has been shown that the use of credit money, both domestically and internationally, results in a lower demand for gold than would otherwise exist. Since the world value of gold is determined by the demand for it in relation to the gold stock, the use of credit money has the effect of holding down the value of the metal. The monetary demand of the world for gold is determined by the aggregate amount of goods and services which the different gold-using countries stand ready and willing to part with in exchange for gold for monetary purposes. In countries like the United States and England, where the widest use of credit money has been resorted to, the demand for monetary gold, in relation to the amount of money work to be done, is less than in countries such as France, where the check system is only slowly coming into use. This means that, in the ordinary course of events, France stands ready and willing to offer a larger proportion of her wealth and income for gold than does the United States or England. This method of statement is, of course, figurative to a certain extent. Nations, as such, are not to be thought of as offering goods for gold in the ordinary case. What really happens is that, if a certain country ordinarily makes use of large amounts of gold coin for internal circulation purposes and insists on maintaining very large gold reserves, an increase in productive activity in that country will cause prices to fall and, barring a similar fall of prices in other countries, will result in an importation of gold. Since, by hypothesis, larger amounts of gold are needed to carry on a certain level of

business transactions in this country than in others, with a given fall of prices more gold will have to be imported to bring about an adjustment of the price level to those of foreign countries than would be the case with a similar fall of prices in a country which economized in the use of gold through resort to an efficient system of credit money.

Purchasing power as applied internationally.—In speaking of the world value of gold, however, we must have in mind the purchasing power of the metal over a somewhat narrower range of goods and services than would be included when looking at the domestic value of a given country's money. If all goods and services were capable of being transported from one country to another without cost, the world value of gold would coincide with the domestic value in each gold standard country, but the fact that such is not the case means that a change in the general price level of one country may or may not result in shipments of gold into or out of that country in proportion to the alteration of its price level as compared with those of other countries. Consequently, it is changes in the price level of commodities, services, and securities which do enter into foreign trade that determine the direction and extent of gold movements among the gold standard countries. In other words, it is the price level of those goods which have a world market which must be taken into account in considering the world value of gold. With this idea of the value of gold in mind, it is correct to say that the value of the metal in any of the gold-using countries cannot vary by much more than the cost of shipment to other countries without resulting in a movement of gold from one country to another which will continue until its value, within the limits set by transportation costs, is the same in all the countries under consideration.

The demand for gold and the demand for money.—It has been noted previously that, within a given country, the demand for money is not identical with the demand for gold where various forms of credit money are used. On the other hand, it has just been stated that, internationally, it is the demand for gold which is important (in conjunction with the supply, of course) in determining the value of money in the gold standard countries. Actually, there is nothing con-

tradictory about these statements. If, in a given country, say the United States, the usual relation between the amount of gold held for monetary purposes and the total amount of money is 1 to 8, then an increase in the demand for money at a certain level of prices in the United States amounting to \$800,000,000, would constitute an increase in this country's demand for monetary gold to the extent of \$100,000,000. In other words, domestically or internationally, it is the demand of individuals for money which determines any country's demand for gold for monetary purposes. Of course, it is true that an elastic bank note and deposit currency will permit an adjustment in the supply of money to the varying needs of business from time to time and so prevent changes in the price level which might otherwise take place. This is a short-time factor which may prevent immediate shipments of gold, but which does not have a long-time or normal application. Over long periods, there tends to be a certain relationship between the amount of gold and the quantity of credit money, and any permanent increase in the demand for money will tend to result in a fractional increase in the country's demand for gold.

Changes in the demand for monetary gold.—The demand of any country for gold tends, then, in the long run, to be determined by the customs and habits of the people and the attitude of the central bank and the state, together with the volume of trade. Before the Great War, the demand for gold for money purposes on the part of France was large because the Bank of France insisted on maintaining a reserve of large proportions behind its note issues, and because the people of France preferred notes and specie to checks in making payment. The French people were also very thrifty and held rather large cash-balances. A change in the habits of the French people, such as the introduction and use of a check currency coupled with decreased holdings of cash, would effect a large decrease in the demand for gold on the part of France.

Over any given period, however, there tends to be little change in the demand for gold resulting from changes in the monetary and banking habits of a country. Habits and customs do not change rapidly and, when the people of a coun-

try have become accustomed to certain methods of making payments, it is difficult to bring about any far-reaching change in these habits. This is not true of changes in the demand for gold as a result of increased economic productivity. The trend of the volume of trade in the more advanced countries was upward for many years prior to the War. This factor in the demand for money must therefore be taken into account in any attempt to explain changes in the world value of gold. With a few interruptions, however, the trend of economic development has been fairly regular at an increasing rate of about 3 per cent per annum and, if allowances are made for it, the fluctuations in the normal world value of gold will be found to have tended in the long run to vary inversely as the quantity and very nearly in proportion.

All this was changed with the advent of the Great War. A tremendous decrease in the demand for monetary gold occurred in the majority of the belligerent countries. The necessities of war made goods in the form of munitions, supplies, etc., relatively more important in comparison with gold than formerly, and the countries concerned readily relinquished portions of their gold stocks in exchange for the needed goods. The concentration of gold in the neutral countries, especially in the United States, combined with a decreased demand for gold in the latter country as a result of recent banking reforms, led to a marked decrease in the world value of gold. The dynamic elements introduced by the War have since continued to play an important part in determining fluctuations in the world value of gold.

Conclusion. — Internationally as well as domestically, then, it is seen that variations in the normal value of money are largely a result of changes in the quantity, but that dynamic and abnormal changes in gold value are to be traced primarily to changes in the monetary demand for gold. Perhaps the most potent factor in the demand for monetary gold is the size of the reserves which central banks insist on keeping, or which they are required to maintain. This subject, which is of large importance, will be considered at some length in the following chapter.

REFERENCES

- Angell, J. W. *The Theory of International Prices*. Cambridge. 1926.
- Cassel, G. *Money and Foreign Exchange after 1914*.
- Einzig, P. *International Gold Movements*. London. 1929.
- Harris, S. E. *Exchange Depreciation: Its Theory and History, 1931-1935*. Cambridge. 1936.
- Heilperin, M. A. *International Monetary Economics*. New York. 1939.
- Lawrie, H. N. *Foreign Currency and Exchange Investigation, Foreign Exchange Quotations and Curves*. Washington. 1924.
- Whittlesey, C. R. *International Monetary Issues*. New York. 1937.
- Young, J. P. *European Currency and Finance*.
- Annual Reports of the Board of Governors of the Federal Reserve System.*
- Federal Reserve Bulletin.*
- Selected Documents on the Distribution of Gold*. Geneva. (League of Nations.) 1931.

PART V

MONETARY AND BANKING PROBLEMS

CHAPTER XXX

THE PROBLEM OF CENTRAL BANK RESERVES

Introductory note.—In 1931, many of the world's great trading countries left the gold standard, followed in succeeding years by practically all of the important nations which had not abandoned gold in 1931. For some years, therefore, the problem of central bank reserves has not been much in the foreground. Although reserve requirements were retained, in many instances, even after the departure from the gold standard, the repeal of requirements that central banks redeem their liabilities in gold made these requirements largely a matter of form, without practical significance. Finally, in 1940 after the outbreak of war in Europe, many existing requirements were more or less drastically altered to permit the use of central bank reserves for war purposes.¹

Under the circumstances, a discussion of central bank reserves may seem of little or no importance except as a matter of historical interest. This is not entirely the case. It is still possible, if not probable, that, at some time following the cessation of hostilities, the leading countries of the world will return to an international gold standard. When this time arrives, the problem of central bank reserves will assume a high degree of significance. It will be well, then, to know some of the difficulties which emerged in the years prior to 1931 and to be prepared to meet them. The purpose of the present chapter is to consider the problems that arose in that period and their suggested solutions. We shall therefore revert to central bank reserve requirements as they existed in 1930 in the following pages.

¹ For a résumé of these changes, see the Annual Report of the Bank for International Settlements, May 1940, chapter VI.

Central bank reserve requirements.—As examples of the reserve requirements of some of the more important central banks, the following extracts from *Legislation on Gold*² may be presented :

England.—The Bank of England has the right to issue 260 million pounds in excess of its gold reserve. The gold reserve must consist of gold coin and gold bullion held by the issue department of the Bank. The amount of notes issued over and above the gold reserve (the fiduciary note issue) must be fully covered by securities and silver coins, the latter at no time to exceed five and one-half million pounds.

France.—The Bank of France is required to hold a reserve in gold of at least 35% of the total sum of the note circulation plus current credit accounts.

Germany.—The Reichsbank is required to hold a reserve of at least 40% against its note circulation. This reserve must consist not less than three-quarters of gold (30% of the note circulation) and the rest of foreign exchange. The foreign exchange must be calculated at its gold value for the time being and may consist of bank notes or bills of exchange having not more than 14 days to run, or cheques and claims due from day to day, payable in foreign currency by a bank of known solvency in foreign financial centers. . .

In exceptional circumstances the reserve may be allowed to fall below 40% against the payment of a graduated tax.

Italy.—The Bank [of Italy] is required to secure its notes in circulation plus its other sight liabilities, including the Treasury current account, by a reserve of not less than 40% in gold or foreign exchange convertible into gold.

Japan.—The Bank of Japan has the right to issue notes to the amount of 120 million yen against :

- (a) Government loan bonds or Treasury Bills or other reliable securities ;
- (b) Commercial bills.

In case of necessity the Bank, with the consent of the Minister of Finance, may increase the fiduciary issue subject to the payment of a tax.

All notes issued over and above the permitted fiduciary issue must be covered by an equivalent value of gold and silver coin and bullion, provided that silver coin and bullion shall not exceed one-fourth of the total amount of such reserve.

Norway.—The Bank [of Norway] has the right to issue notes to the sum of 250 million kroner, in excess of the gold reserve. The reserve consists of gold coined or in bullion in the vault of the Bank or deposited to its account with the Mint.

If unusual circumstances demand, the King, with the approval of the

² Publication of the League of Nations, Geneva, 1930.

Storting, may authorize the issue of additional notes subject to the payment of a tax by the Bank.

Sweden.—The Bank [of Sweden] has the right to issue notes for a sum equal to double the amount of the metallic [gold] reserve in addition to the fixed fiduciary issue of 250 million kroner. If an increase of the authorized note issue is deemed absolutely necessary on account of war, menace of war, or a serious financial crisis, the King and the Riksdag acting together may authorize the issue of an additional amount of 125 million kroner. The Board of Directors is bound to retire from circulation as soon as possible whatever additional notes may be issued by virtue of this authorization. . .

The metallic reserve may not be maintained at an amount below 150 million kroner.

In the United States a reserve of 40 per cent in gold had to be maintained against Federal Reserve notes in circulation, and a reserve of 35 per cent in gold or lawful money against deposits in the Federal Reserve banks.

A glance at the foregoing requirements indicates that the minimum reserves which central banks were required to keep against note issues were of two distinct types. In England, Japan, and Norway a fixed fiduciary issue was permitted, notes in excess of this issue to be secured entirely by specie. In France, Germany, Italy, and the United States a proportional or percentage reserve was required. Sweden had a combination of the two systems with a fixed fiduciary issue and a 50 per cent required reserve on notes in excess of the specified figure. The relative merits of these systems will receive comment later in the chapter. For the present it may merely be noted that the reserves held by central banks against their note issues were relatively large.

Reason for large size of central bank note reserves.—

It may be thought that these reserves were higher than necessary to maintain the convertibility of the bank notes into gold. The notes of such banks are usually made legal tender and are accepted within the country of their issuance quite as readily as full-bodied coin, and perhaps a trifle more readily, since they are apt to be more convenient. If nothing but the domestic circulation had to be considered, it would be true that the large reserves maintained against these central bank note issues were greater than necessary. If there were no question of foreign monetary relations, the

only demands for gold would ordinarily be for use in the arts, and reserves of the size noted would far more than meet the demands for industrial uses. But gold is needed for international payments as well, to a certain extent. There is a possibility of a greater economy in gold reserves than now exists, a subject which will receive attention later, but, even so, the possible need for gold for purposes of foreign shipment increases the need for sizeable reserves behind central bank note issues.

In addition to the need for gold to meet demands for foreign shipment and for use in the arts, a certain amount must be kept in order to maintain confidence in the ability and willingness of the central bank to pay its notes on demand in gold. Contingencies may arise which, if not met, will destroy the confidence of the people in the bank's ability to make gold payments, whereupon many unnecessary demands for the conversion of notes into gold will materialize. It will not do for the reserve to be so small that an exceptional demand for gold, if met, will reduce it to zero. Another demand for gold might arise before the reserve could be built up again, and if this is not met, the bank's notes will depreciate in value as compared with gold.

It may appear to be an illogical and unreasonable attitude on the part of the people that they should be perfectly content to accept notes instead of gold as long as the gold reserve is ample, but that their desire for gold should increase as soon as the prospects of being able to obtain it become in any way uncertain. In reality, however, this attitude is entirely justified, especially as regards government credit money. Individuals, consciously or unconsciously, realize the propensity of governments, and some banks, to issue unduly large quantities of paper money when they are not tied down to something substantial and tangible such as the necessity of keeping their notes convertible. Gold is valued by all; paper money which is not convertible into gold (or, in some cases, silver) is not. It is therefore perfectly natural that misgivings as to their ability to obtain gold should cause people to want it, while the surety of being able to get it results in a decrease in the intensity of this desire. In fact, the only way in which a government,

operating through a central bank, can hope to stay on the gold standard, is to insist that the latter keep fairly large quantities of gold behind paper issues of the sort described — gold which, to all appearances, is lying idle and useless in the vaults of the bank, but which is nevertheless necessary for accomplishing the purpose in view. Another reason why such notes should be backed by considerable quantities of gold will appear as we proceed to a discussion of the reserves held by individual banks against their demand deposits.³

Factors determining the size of reserves against deposits. — The determination of the size and composition of reserves against deposits is of particular importance in the United States, England, and Canada, the largest and most important of the check-using countries. Some checking accounts are maintained in other countries, but no wide use of a check currency has developed. The remainder of this discussion, therefore, will find its chief application in the case of the countries mentioned.

When any large proportion of total payments is made by check, banks will find the demand for hand-to-hand money limited chiefly to the demands of storekeepers and retail merchants generally for *till money* for the purpose of making change, the demands of individuals for *pocket money*, and the demands of employers for hand-to-hand money for *payrolls*. There is a more or less continual flow of such hand-to-hand money into and out of the banks. Each day certain individuals are drawing down their deposits in exchange for hand-to-hand money while others will be taking such money to the banks and depositing it to their credit. These deposits and withdrawals tend to cancel, but will probably not cancel exactly on any given day. Furthermore, it would be undesirable and inconvenient for banks to try to pay out the same money which was deposited — on any given day — even if withdrawals and deposits did balance exactly. It would not only confuse the accounts of the tellers, but, should the bulk of the withdrawals come in the morning and the deposits in the afternoon, difficulty would

³ Discussion of reserves behind note issues of other than central banks is omitted because, in most countries, such note issues are comparatively unimportant.

be experienced unless the bank had some money on hand in the morning to meet the withdrawals. It is therefore necessary for banks to keep on hand a small reserve of "till money," as it may be termed, to meet these regularly recurring daily demands.

When checks are used for 85 per cent, say, of all payments, it is clear that the size of the till money reserve may safely be much smaller than where no wide resort to check payments exists. It is true that checks drawn for making payments and deposited in other banks by the recipients will come back for payment through the clearing house in a short time, but such claims are largely offset by others which the payor bank has against other banks in the community. In so far as these conflicting claims cancel, there will be no actual need of reserve for purposes of paying claims held by other banks. But the fact that claims at the clearing house seldom cancel entirely is a reason for the maintenance of an additional reserve by the individual bank against the possibility of an unfavorable clearing balance.

Besides the reserve necessary for till money purposes and to meet adverse clearing balances, the individual bank will usually want to carry some amount in excess of what would normally be needed for these purposes in order to meet possible contingencies—unexpected and unpredictable demands for cash. When it is possible for the individual banks of the system to augment their reserves by borrowing, directly or indirectly, from the central bank, as is practically always the case, the need for reserves to meet contingencies is almost negligible. Accordingly, the amounts which the commercial banks keep on hand as reserves are surprisingly small, usually averaging from ten to fifteen per cent of their demand deposits. In the United States, the minimum reserve which must be kept is fixed by law, but in England, where the joint stock banks are allowed to determine their own reserves—as also in Canada⁴—the proportion kept is about the same. It would appear, then, that a considerably greater economy in the use of gold is effected through the use of deposit currency than through the issuance of central bank notes. But the real economy may be considerably greater than is indi-

⁴ A nominal reserve of 5 per cent is now required in Canada.

cated by the proportion of reserve to deposits which the individual banks maintain. This is true because the reserves of individual banks are not usually composed entirely of gold. The till money reserves are likely to consist largely of notes of the central bank, while the remainder of the reserves held are frequently partly in the form of deposit credits with the central institution, or deposits with other banks in the system.

Possible economy through redeposited reserves.—The economy in gold which may result from the conditions depicted is illustrated by the case of the United States in 1930. The average reserve required of member banks of the Federal Reserve system amounted to about 10 per cent, and all such reserves had to be kept in the form of deposit accounts with the Federal Reserve banks. Actually, of course, member banks had to keep some reserve in their own vaults, in excess of that required by law, to care for till money needs. This might consist of Federal Reserve notes, standard money, or any other form of acceptable hand-to-hand money. For purposes of showing the *possible* economy in the use of gold, we shall assume that Federal Reserve notes only were used as till money, although that reserve actually consisted of gold or silver coin and certificates, United States notes, national bank notes, and subsidiary money in addition to Federal Reserve notes.

Behind their deposits, which were the reserves of the member banks for the most part, the Federal Reserve banks were required to keep a minimum reserve of 35 per cent in gold or lawful money. The amount of lawful money so retained, aside from gold coin and certificates, was negligible and we may consider those reserves as gold reserves, which, in fact, they practically were. Against Federal Reserve note issues the Reserve banks had to keep a reserve of 40 per cent in gold. Consequently, one dollar in gold in the vaults of the Federal Reserve banks formed the basis of an expansion of either \$2.85 (approximately) of reserve deposits or \$2.50 of Federal Reserve notes. But the deposits of the Reserve banks constituted the whole of the legal reserves and the bulk of the real reserves of the member banks, so that \$2.85 in reserve deposits could support an expansion of individual de-

mand deposits of \$28.50. Federal Reserve notes, on the other hand, were used for reserve purposes only to the extent necessary to meet till money requirements, which probably did not average more than two per cent of the member banks' demand deposits. For the most part Federal Reserve notes were paid out to customers dollar for dollar and so had no appreciable power to support a further expansion of bank credit in the form of demand deposits. It approximates the truth to say, then, that the total amount of credit money which one dollar in gold, used as reserve for Federal Reserve notes, could support was merely the \$2.50 in notes which could be issued against it. Actually, the possible expansion of bank credit money, both notes and deposits, which could take place on the basis of a dollar in gold in the Federal Reserve banks would vary between these two limits, depending on the relative demand for deposit credit and hand-to-hand money. At all events, the point to be made is clear. There was much greater economy in the need for gold than was at all apparent from the reserve ratios of the individual banks.⁵

Deposit reserves in England. — The situation was somewhat similar in England. The joint stock banks were not subject to any legal reserve requirements, but in practice they kept their reserves partly in the form of deposits with the Bank of England and partly in cash in their own vaults. A considerable amount of the latter was in Bank of England notes. The joint stock banks, taken together, could expand their loans and deposits to several times the amount of their reserves. In so far as these reserves consisted of Bank of England notes, a further economy in the use of gold was to be obtained, as these notes were not backed entirely by gold. Deposits at the Bank of England also had less than 100 per cent reserve behind them. The Bank is not required to keep any specific reserve by law, but in 1930 maintained a reserve ratio in the neighborhood of 35 per cent.⁶ To the extent that the reserves of the joint stock banks consisted of deposits

⁵ At the present time this analysis would have to be modified substantially by the fact that the required reserves of member banks have been raised, so that they now average about 17.5 per cent of demand deposits instead of 10 per cent. This would cut the limit of expansion of demand deposits from \$28.50 to \$16.25.

⁶ *Federal Reserve Bulletin*, February 1931, p. 86.

with and notes of the Bank of England, there was a greater economy in gold than was apparent from their reserve ratios.

The need for large central bank reserves.—It should now be plain why it is desirable for central banks to keep fairly large reserves of gold behind both their note and deposit liabilities. These reserves normally comprise the ultimate gold reserve of the country upon which the entire credit structure rests. In the check-using countries which have central banks, a really tremendous amount of credit money depends for its acceptability and stability of value upon the gold reserves held by the central institutions. In the United States, for example, the total cash reserves of the Federal Reserve banks at the close of the year 1930 amounted to some 3081 millions of dollars and comprised over 75 per cent of the Reserve banks' note and deposit liabilities, so that the proportion of reserves held was relatively high at that time, yet the total of bank credit money (Federal Reserve notes and member bank demand deposits) supported by these reserves amounted to nearly 20 billions of dollars. Such central bank reserves may have to be used up, in part at least, in times of stress to maintain confidence in the soundness of the credit structure of the country, but normally they should be kept at a sizeable figure for the very purpose of meeting contingencies when they do arise and thus maintaining the necessary confidence in the banking system.

An example of the use of central bank reserves to maintain confidence in the soundness of the currency is to be found in the situation which developed in the autumn of 1931 in the United States. Directly following England's departure from the gold standard in September 1931, loss of confidence on the part of foreign depositors led to withdrawals of gold from the United States amounting to \$700,000,000 in some six weeks, as described in Chapter XXIV. The Federal Reserve banks were able to meet all demands for gold without hesitation, thereby preventing a complete collapse of confidence in the dollar among foreign countries.

Disadvantages of high legal reserve requirements.—Although it has been shown to be desirable for central banks to maintain fairly large reserves of gold for the reasons pre-

sented in the preceding paragraph, it is questionable whether this end can best be attained by the enforcement of high legal reserve requirements. What tends to happen, in practice, is that central banks endeavor to maintain, not only the required reserves but a sufficient amount *in addition* to enable them to meet both anticipated and unexpected demands for gold without drawing their reserves down below the legal minimum. This tendency persists in spite of the fact that the majority of countries permit the proportion of reserves to notes to be lowered under emergency conditions. In fact, it not infrequently happens that gold payments are suspended (in order to conserve the central bank's supply of gold) because reserves have been reduced to the legal minimum or very slightly below it.

The practical outcome of legal reserve requirements, then, has been to concentrate the attention of the public and the banking authorities on the proximity of the actual gold reserve to the legally specified minimum rather than on the ability of the central bank to redeem its obligations in gold. This is quite the wrong attitude and leads central banks to hold larger reserves than are either necessary or desirable.⁷

The solution of this difficulty would seem to lie in a removal of legal minimum reserve requirements, or at least a sharp reduction of legal minima. If the management of central banks is in the hands of capable men, ample gold will be maintained to meet all probable demands without the enforcement of a legal reserve requirement. The attention of the public would then tend to be diverted from legal requirements to the real ability of the central bank to pay in gold, with resulting greater possible economy in the demand for gold by central banks. In this connection, Mr. Keynes has suggested a legally required minimum *amount*, not proportion, of gold to serve as an emergency reserve, while, for the rest, the central bank would be free to determine the volume of reserves to be held normally in excess of this figure. Mr. Keynes also suggests that an upper limit might also be imposed on total note issues.⁸

⁷ This point is brought out in decisive fashion in Cannan, *Modern Currency and the Regulation of Its Value*, pp. 34-37.

⁸ J. M. Keynes, *A Treatise on Money*, II, 273-275.

Tendencies in 1930. — Discussions of reserve requirements in 1930, as well as proposals and legislation about that time, showed a tendency to favor reduced legal requirements. The preparatory commission of experts for the World Economic Conference recommended a reduction in such requirements, and some plans considered by the Conference favored an upper limit of 25 per cent as the required reserve for central banks. The Bank of Canada Act (1930) also prescribed a 25 per cent requirement for the new Canadian central bank.

In view of the marked trend toward high legal requirements which prevailed in the post-war stabilization era, governments were loath to do away with legal reserve requirements entirely, and, unless the central bank is assured of having a sound and conservative management, such action would be distinctly dangerous. The tendency to reduce reserve requirements to 25 per cent, however, was in the right direction. If the gold standard is readopted internationally in the future a 25 per cent required reserve, subject to reduction as conditions become more and more settled, will be in order.

Uniform reserves unnecessary and undesirable. — If *legal* reserve requirements were to be entirely eliminated under sound central banking management, the size of the reserves which would properly be kept by central banks would vary greatly from country to country. If some of the less wealthy and smaller countries desired to retain a partial gold exchange standard, with a portion of the central bank's reserve in the form of foreign exchange, the actual gold reserve needed by such countries would be comparatively small. The central banks of the countries where the foreign exchange balances were maintained, on the other hand, would find it expedient to keep much larger reserves. Such balances are withdrawable in gold on demand (or practically so) by the depositing central banks. Any loss of confidence in the depository banks, therefore, whether justified or not, would be likely to lead to heavy withdrawals of such balances. The loss of \$700,000,000 of gold by the United States in the fall of 1931, referred to on several previous occasions, was largely the result of such frightened withdrawals.

When heavy gold losses of this sort occur, the depositary country is likely to be forced off the gold standard unless its central bank holds substantial gold reserves.

The abolition of legal requirements would leave each central bank free to decide what proportion of gold to notes and deposits was essential to its own sound operation. In countries without highly developed check systems and with few or no foreign balances, the central bank might easily get along with a reserve of 25 per cent or less, while in countries containing important international financial centers and holding large foreign balances, a central bank reserve of from 40 to 60 per cent might be necessary. No legal requirements can take adequate care of such differences. In the past they have been fairly uniform for different countries, which has had the result of imposing a particularly heavy burden on those central banks having to maintain large reserves in excess of legal requirements.

Conclusion.—There is considerable unanimity of opinion on the part of students of money to the effect that the gold standard, when and if it is generally re-established, will require a substantial degree of co-operation on the part of central banks if it is to function satisfactorily as an international monetary standard. The question of central bank co-operation and the machinery by which such co-operation has been, and may again be, effected will be considered in the next chapter.

REFERENCES

- Cannan, E. *Modern Currency and the Regulation of Its Value.*
Keynes, J. M. *A Treatise on Money.*
Legislation on Gold. Geneva (League of Nations). 1930.

CHAPTER XXXI

CENTRAL BANK CO-OPERATION

The pre-war situation.—Prior to the first Great War, international banking relations were confined pretty largely to private arrangements between correspondent banks in different countries or between a bank in one country and its branches abroad. The major commercial countries, with the exception of the United States and Canada also had central banks which, upon occasion, made moves in co-operation with each other. For the most part, however, these institutions were concerned with their own affairs and promulgated their own policies without much regard for their possible effects on the banking systems of other countries.

The banking system of the United States, in the years preceding the outbreak of the War, had exceptionally few contacts with foreign banking systems. A few New York banks and banking houses did maintain rather extensive correspondent relations with foreign banks, relations which were necessary to the financing of foreign trade, and a comparatively small number of similar direct relations existed between banks in other financial centers and foreign institutions. The great bulk of the banks of the country, however, had no foreign connections, but relied on their domestic correspondents in the financial centers to take care of their modicum of foreign exchange business. Moreover, as the Federal Reserve system had not been established, relations between foreign central banks and the American banking system were practically nonexistent.

Post-war changes.—Since the termination of the War, the situation has changed in many respects. For the countries of Europe generally, alterations in methods and old-time policies were necessitated by the maze of international indebtedness which the War had engendered and by the disorganized condition of most of the national currencies.

As for the United States, the comparative stability of this country's currency combined with the effects of a large amount of foreign lending, served to elevate the American banking system to a position of international importance, a process which was assisted by the existence of the Federal Reserve banks — especially the Federal Reserve Bank of New York. The international aspects of American banking were thereby radically altered. Dollar exchange assumed a leading position, and the New York banks came into possession of large foreign balances which represented both deposits of individual foreign banks and foreign exchange reserves of various central banks. The development of the acceptance market, described earlier, also permitted the investment of foreign funds in the American market. With the developments which accompanied and followed the War, moreover, the larger American banks expanded their foreign connections and built up systems of foreign branches. As a result of this, sixteen American banks and banking houses had 238 offices located in 38 foreign countries.¹ Since 1930 the number of foreign offices has decreased by about 15 per cent, ten American banks operating 174 banking offices in 29 foreign countries at the outbreak of the European war in 1939.² In spite of this decrease, however, American banks still do a substantial business through their branches and agencies in foreign countries.

Need for co-operation.—In the set of circumstances which arose from the exigencies of war financing, there developed a distinct need for co-operation of an international character, particularly among the central banks of the various countries. Before the War, the necessity for any general co-operation of central banking institutions had not been felt because, with the more normal economic and financial conditions which existed at that time, such international banking factors as gold movements, transfers of funds from one market to another, etc., could safely be left to the play of unhampered economic forces. In the later period, however, many of the leading commercial countries of the world

¹ Phelps, C. W., "The American Banker Sets up Shop Abroad," *Bankers Magazine*, January, 1930.

² The latter data are from an unpublished paper by Dr. Phelps and are reproduced with his permission.

were not on the gold standard, or were trying to return to the gold standard, or had just returned to it. This confused currency situation, coupled with the many transfers of funds that had to be made as a result of war debts and claims, prevented automatic economic forces from effecting satisfactory results. As a general return to the gold standard and stabilized currency conditions was obviously in the best interests of all countries concerned, including those already on the gold standard, a considerable amount of co-operation developed as a matter of self-interest on the part of the leading central banks.

Forms of co-operation.—Co-operation among central banks has been evidenced in two chief ways, viz., the extension of credits to other central banking institutions, and the pursuit of a credit policy which would assist other central banks in difficulties. There have been numerous instances of both of these forms of co-operation, but it will suffice here to note one or two examples of each type.

When England returned to the gold standard in 1925, it was feared that heavy withdrawals of gold after the removal of the restrictions on gold exports that had been in force might threaten the ability of England to remain on a gold standard basis.

In these circumstances the Bank of England applied to the Federal Reserve System for the right to draw upon the reserve banks for gold up to an amount of \$200,000,000, if required, over a period of two years. At the same time the British Government arranged for an additional credit of \$100,000,000 with a private group of bankers in this country. . . . The Federal Reserve Board approved the arrangement entered into by the Federal Reserve Bank of New York, with the participation of the other reserve banks, with the Bank of England. Under this arrangement the Federal Reserve Bank of New York undertook to sell gold on credit to the Bank of England from time to time during the two following years, but not to exceed \$200,000,000 outstanding at any one time. The credit was to bear interest to the extent that it was actually used at a rate of 1 per cent above the New York Reserve Bank's discount rate, with a minimum of 4 per cent and a maximum of 6 per cent, or, if the Federal reserve discount rate exceeds 6 per cent, then at the discount rate of the bank. . . . Upon purchase of gold the Bank of England would place on its books to the credit of the Federal Reserve Bank of New York an equivalent deposit in pounds sterling. This deposit might be used from time to time by arrangement with the Bank of England in the purchase of eligible sterling commercial bills which

will be guaranteed by the Bank of England, and in that case discount earned on the bills would be applied to the payment of interest.⁸

Actually, the credit was never used, but it was an essential step in the safe return of England to the gold standard.

At subsequent times the Federal Reserve banks co-operated with various European central banks in extending credits to the central banks of Belgium, Poland, Czechoslovakia, Italy, and others in connection with a return to the gold standard or the adoption of measures for currency stabilization. These later credits were usually in the form of agreements to purchase prime commercial bills, up to a stated amount, from the central bank to which the credit was extended.

As for the other type of co-operation, the information which is available to the public is much less definite. The easy money policy of the Federal Reserve banks in 1927, described in the preceding chapter, is generally admitted to have been adopted in an attempt to check or reverse the inflow of gold into the United States which was proving embarrassing to other central banks, and there is some reason to believe that Federal Reserve policy in 1924 may have had a similar end in view.

Other tactics have at times been adopted to check what the central banks have considered to be undesirable gold movements. For example :

Very often, unofficial pressure is borne upon banks to abstain from gold shipments even though they appear profitable. It is an open secret that in June of 1929 . . . for several weeks the Reichsbank dissuaded the German banks from taking gold from London, although the exchange was well beyond gold export point. Similarly, the Federal Reserve Bank of New York is believed to have put pressure upon American banks to abstain from importing gold from London. . .

Moreover, most central banks do not confine their interference with gold points to mere "peaceful dissuasion." There are a great variety of weapons at their disposal enabling them to discourage gold shipments they consider undesirable. The mildest of them is to abstain from assisting in the packing of gold, in which case additional expense is incurred by the transport of bars or coins to suitable premises where they can be packed. The Federal Reserve Bank of New York, which usually delivers gold free on board if it approves the transaction, refuses to grant this voluntary facility to an unwanted gold shipment. The regulations

⁸ *Annual Report of the Federal Reserve Board, 1925*, pp. 12-13.

as to assay are usually sufficiently elastic to allow a fair scope for central banks to raise difficulties should they wish to do so. Usually there is nothing to prevent them from insisting on the assay of every bar—though they may bear the stamp of an approved central bank—or delaying the payment for part of the consignment.⁴

Without commenting specifically on the desirability of the various measures employed by central banks to assist each other—some of which have been of extremely doubtful wisdom—it is clear that the post-war difficulties greatly furthered the movement in the direction of co-operation among these institutions. Nevertheless, since co-operative action depended upon the initiative of this or that central bank, the results were more or less sporadic and uncertain. In these circumstances, a more unified and continuous policy of co-operation was desirable. Various suggestions were offered, proposing regular meetings of central bank governors at specified intervals, but no action was taken. Finally, however, the establishment of the Bank of International Settlements provided the necessary machinery by means of which a policy of continuous co-operation might be put into effect.

THE BANK FOR INTERNATIONAL SETTLEMENTS

Reasons for organization.—The Bank for International Settlements was provided for in the so-called Young Plan for German reparations payments. It was deemed necessary to put the business connected with the transfer of reparations into the hands of a non-political financial institution which would be properly suited to perform the task assigned to it. But an institution charged with the function of effecting reparations transfers might well be endowed with certain other powers. In the words of the Committee of Experts:⁵

It is obviously desirable, in the interest of obtaining results with the greatest efficiency, not to limit unduly the functions of the institution. The character of the annuities and the magnitude of the payments to be transferred over the exchanges provide at once the opportunity and the need for supplementing with additional facilities the existing machinery for carrying on international settlements, and, within limitations of the sound use of credit, to contribute to the stability of international

⁴ Einzig, P., "Gold Points and Central Banks," *Economic Journal*, September 1929 ; pp. 384-385.

⁵ *Report*, June 7, 1929, par. 55.

finance and the growth of world trade. We consider that by judicious non-competitive financial development the bank should prove a useful instrument for opening up new fields of commerce, of supply and of demand, and will thus help to solve Germany's special problem, without encroaching on the activities of existing institutions.

The bank, as finally established, had as its chief purpose the receipt, management, and distribution of the annuities payable by Germany under the Young Plan, and, as a secondary purpose, the augmentation of the existing machinery for the settlement of international transactions. It is with the secondary or banking functions of the bank that we shall be chiefly concerned.

Provision was made for the appointment of an Organization Committee to draft the statutes of the bank, its charter, and the trust agreement with reference to reparations payments. The work of the committee was approved and accepted by the second session of the Hague conference, the convention being signed on January 20, 1930. The bank opened its doors on May 20, 1930.

Organization.—The Bank for International Settlements (hereafter referred to as the B.I.S.) is a joint stock company located at Basle, Switzerland. It was established by the central banks of Belgium, France, Germany, Great Britain, and Italy, the Industrial Bank of Japan heading a Japanese banking group, and J. P. Morgan & Co., the First National Bank of New York, and the First National Bank of Chicago in the United States. The Federal Reserve banks were prevented from participating in the establishment of the B.I.S. since there is no provision by which they may hold stock in any such institution. The B.I.S. was incorporated by and received its charter from Switzerland under the terms of the convention signed at the Hague conference.

Capital.—The authorized capital of the B.I.S. is 500,000,000 Swiss francs divided into 200,000 shares of 2500 francs each. A total of 112,000 shares was subscribed by the seven institutions or groups founding the bank, and by the close of the first fiscal year (March 31, 1931) an additional 53,100 shares had been subscribed by 16 other central banks or banking institutions. The remaining shares are

available for allotment to other banking institutions making applications to the Board of Directors of the B.I.S. In order to subscribe to such shares, a bank must be located in a country on the gold or gold exchange standard or in a country interested in reparations payments. Aside from the original subscriptions, not more than 8000 shares may be subscribed by one bank. Only 25 per cent of the subscribed capital has been paid in, the remainder being subject to call at the discretion of the Board of Directors.

Earnings and dividends.—The statutes of the B.I.S. provide that the annual net profits of the bank shall be applied in the following manner :

(a) Five per cent, or such portion thereof as necessary, shall be retained in the business in the form of a legal reserve fund (surplus) until that fund shall amount to 10% of the amount of the existing paid-up capital.

(b) The remainder shall be applied in or toward the payment of a dividend (which shall be cumulative) of 6% of the paid-up capital.

(c) Of the remainder, if any, 20% shall be paid, at the discretion of the Board of Directors, to the shareholders until a maximum further non-cumulative dividend of 6% is reached.

(d) After providing for the foregoing, one-half of the remaining profits shall be carried to a general reserve fund (surplus) until it equals the paid-up capital. Thereafter, 40% shall be so applied until the surplus equals twice the paid-up capital ; 30% until it equals three times the paid-up capital ; 20% until it equals four times the paid-up capital ; 10% until it equals five times the paid-up capital ; and 5% thereafter.

(e) Any remaining profits are allocated to certain government or central banks concerned with annuity payments in proportion to deposits maintained by the central banks in the B.I.S. (Since this section is concerned with reparations payments, it is not given here in detail.)

Management.—The administration of the B.I.S. is vested in a Board of Directors of not more than 25 members determined as follows :

(a) The governors of the central banks of Belgium, France, Germany, Great Britain, Italy, Japan, and the United States, or their respective nominees if any of the governors are unable or unwilling to serve.

(b) Seven persons representative of finance, industry, or commerce of the same nationality as the aforementioned governors and appointed by them.⁶

⁶ Since the State Department of the United States refuses to allow any officials of the Federal Reserve System either to serve on the Board of Directors of the B.I.S. or to appoint anyone so to serve, the two American directors are appointed by the governors of the other central banks who are members of the Board.

(c) Not more than nine persons selected by the foregoing members of the Board from a panel of candidates submitted by the governors of central banks of countries other than those mentioned in (a) in which stock in the B.I.S. has been subscribed. Each such governor may submit a list of four candidates (including himself) of which two shall be representative of finance and two of industry or commerce. From these lists the Board may elect, by a two-thirds majority, not more than nine members. Such members are elected for three years, the offices of three expiring each year, and are eligible for re-election. If any of the countries in question has no central bank, the Board may designate an appropriate financial institution to submit candidates for election.

(d) During the period of the reparations payments, two persons, one French and one German, representing industry or commerce and appointed by the governors of the Bank of France and the Reichsbank respectively.

The Board of Directors, as thus constituted, is the chief managing body of the bank. It elects a chairman and one or more vice chairmen from among its members, the chairman to serve as president and chief executive officer of the bank. The Board also appoints a general manager on the proposal of the president. Heads of departments and officers of like rank are appointed by the Board upon the recommendation of the president after consultation with the general manager. The president is elected for three years and is eligible for re-election.

Meetings of the Board of Directors must be held not less than ten times a year, at least four meetings being held at the registered office of the bank at Basle. Directors must ordinarily be resident in Europe or in a position to attend meetings regularly, and no director may be a member or an official of a government or a legislative body, unless he is the governor of a central bank. A director who cannot be present at any meeting may give a proxy to another member.

Powers and restrictions.—Since the powers and restrictions of the B.I.S. are of outstanding importance, they are quoted verbatim from the bank's statutes as follows :

1. The operations of the Bank shall be in conformity with the monetary policy of the central banks of the countries concerned.

Before any financial operation is carried out by or on behalf of the Bank on a given market or in a given currency the Board shall afford to the central bank or central banks directly concerned an opportunity to dissent. In the event of disapproval being expressed within such rea-

sonable time as the Board shall specify, the proposed operation shall not take place. A central bank may make its concurrence subject to conditions and may limit its assent to a specific operation, or enter into a general arrangement permitting the bank to carry on its operations within such limits as to time, character and amount as may be specified. This article shall not be read as requiring the assent of any central bank to the withdrawal from its market of funds to the introduction of which no objection had been raised by it, in the absence of stipulations to the contrary by the central bank concerned at the time the original operation was carried out.

Any governor of a central bank or his alternate or any other director specially authorized by the central bank of the country of which he is a national to act on its behalf in this matter, shall, if he is present at the meeting of the Board and does not vote against any such proposed operation, be deemed to have given the valid assent of the central bank in question.

If the representative of the central bank in question is absent or if a central bank is not directly represented on the Board, steps shall be taken to afford the central bank or banks concerned an opportunity to express dissent.

2. The operations of the Bank for its own account shall only be carried out in currencies which in the opinion of the Board satisfy the practical requirements of the gold or gold exchange standard.

3. The Board shall determine the nature of the operations to be undertaken by the Bank.

The Bank may in particular :

(a) buy and sell gold coin or bullion for its own account or for the account of central banks ;

(b) hold gold for its own account under earmark in central banks ;

(c) accept the custody of gold for the account of central banks ;

(d) make advances to or borrow from central banks against gold, bills of exchange and other short-term obligations of prime liquidity or other approved securities ;

(e) discount, rediscount, purchase or sell with or without its indorsement bills of exchange, checks and other short-term obligations of prime liquidity, including treasury bills, and other such government short-term securities as are currently marketable ;

(f) buy and sell exchange for its own account or for the account of central banks ;

(g) buy and sell negotiable securities other than shares for its own account or for the account of central banks ;

(h) discount for central banks bills taken from their portfolio and rediscount with central banks bills taken from its own portfolio ;

(i) open and maintain current or deposit accounts with central banks ;

(j) accept :

(i) deposits from central banks on current or deposit account ;

(ii) deposits in connection with trustee agreements that may be

made between the Bank and governments in connection with international settlements ;

(iii) such other deposits as in the opinion of the Board come within the scope of the Bank's functions.

The Bank may also :

(k) act as agent or correspondent of any central banks ;

(l) arrange with any central bank for the latter to act as its agent or correspondent. If a central bank is unable or unwilling to act in this capacity the Bank may make other arrangements, provided that the central bank concerned does not object. If in such circumstances it should be deemed advisable that the Bank should establish its own agency, the sanction of a two-thirds majority of the Board will be required.

(m) enter into agreements to act as trustee or agent in connection with international settlements, provided that such agreements shall not encroach on the obligations of the Bank toward third parties ; and carry out the various operations laid down therein.

4. Any of the operations which the Bank is authorized to carry out with central banks under the preceding article may be carried out with banks, bankers, corporations or individuals of any country provided that the central bank of that country does not object.

5. The Bank may enter into special agreements with central banks to facilitate the settlement of international transactions between them.

For this purpose it may arrange with central banks to have gold earmarked for their account and transferable on their order, to open accounts through which central banks can transfer their assets from one currency to another and to take such other measures as the Board may think advisable within the limits of the powers granted by these Statutes. The principles and rules governing such accounts shall be fixed by the Board.

6. The Bank may not :

(a) issue notes payable at sight to bearer ;

(b) "accept" bills of exchange ;

(c) make advances to governments ;

(d) open current accounts in the name of governments ;

(e) acquire a predominant interest in any business concern ;

(f) except so far as necessary for the conduct of its own business, remain the owner of real property for any longer period than is required in order to realize to proper advantage such real property as may come into the possession of the Bank in satisfaction of claims due to it.

7. The Bank shall be administered with particular regard to maintaining its liquidity, and for this purpose shall retain assets appropriate to the maturity and character of its liabilities. Its short-term liquid assets may include bank notes, checks payable at sight drawn on first-class banks, claims in course of collection, deposits at sight or at short notice in first-class banks, and prime bills of not more than ninety days' usance of a kind usually accepted for rediscount by central banks. The proportion of the Bank's assets held in any given currency shall be determined by the Board with due regard to the liabilities of the Bank.

Progress of the B.I.S.—During the first two years after opening its doors for business in May 1930, the B.I.S. made substantial progress. This short period was the only one since its establishment in which the Bank has been able to follow the course intended by its founders, since the wholesale departure from the gold standard late in 1931 interrupted its activities as described later in the chapter. It is therefore of some interest to examine the principles which guided the Bank during the short period of normal operations referred to. They were concisely stated by the Bank's first president, Mr. Gates W. McGarrah, as follows :⁷

(A) The maintenance of great liquidity. This is requisite because a considerable portion of our funds—and we hope a growing one—constitutes the foreign exchange reserves of central banks. Such reserves must be quickly forthcoming in emergencies. Besides, to serve as a stabilizer of the exchanges, the Bank must be ready to move funds rapidly from one point to another. Consequently, though a third of our funds are placed with us for over thirty-seven years, only ten per cent are invested for over six months and nothing over two years, sight to three months being our preference. In "sight" I include commercial bills and Treasury bills which are rediscountable at any moment on demand. Such investments as we have running over three months are all readily realizable.

(B) We have endeavored to relate investments directly to the promotion of trade and commerce, national or international. We do not finance Governments, and our Statutes expressly prohibit advances to Governments.

(C) With due regard to our commitments in a given currency and to liquidity, we have endeavored to move capital from markets where it is superabundant to markets where it is needed. Thus we have made investments in Germany, and during the difficulties which ensued some weeks ago, the B.I.S. purchased more reichsmarks and increased its investments there.

(D) We move capital from markets of low interest rates to markets of high interest rates, in order to help the trend toward a leveling-out of rates and to assist commerce and agriculture in those centers where the interest rate is excessive. Thus, with proper security, we have made advances in certain Eastern countries.

(E) We have moved our funds in ways aiming to be helpful to currencies which are temporarily or seasonally weak. In different parts of the world there are certain seasonal demands for financing, and these demands customarily involve a strain on the currency. Hence, by advancing short-term funds in these periods to the local central banks, we

⁷ *Proceedings of the Academy of Political Science*, January 1931, pp. 33-34.

accomplish the double object of relieving the exchange strain and of putting capital where it is needed.

(F) Finally, we make investments with a view to organizing credit facilities in monetary centers where necessary instruments of credit are lacking. If a given center has not, let us say, developed the helpful agency of a bill market, we state that we are ready to make a local investment if such a market is organized, whereupon we invest in bills. The value of this operation is that it attracts other funds into the countries in question, thus increasing the volume of credit at the disposal of the national economy.

Development of a gold clearing system.—Among the special problems which confronted the B.I.S., the establishment of an international gold clearing system assumed considerable significance. Early in 1931 some small amount of transfers by means of book entries at the B.I.S. had been effected. In a desire to extend the usefulness of the bank in helping to eliminate unnecessary gold movements, the Board of Directors, in their meeting of February 9, 1931, after some preliminary conferences with various central banks on the question, adopted a resolution which read:

When central banks have to receive payments from other central banks in respect to international gold payments or foreign exchange they will notify, where possible, their counterparties that the Bank for International Settlements is their receiving bank.

At the end of March 1931, it was stated in the Annual Report of the bank that "gold of a value of more than a billion Swiss francs held abroad in New York, London, Paris, Berne, Stockholm, and Copenhagen has been reported to the bank for the foregoing purpose. In addition, the bank itself holds in its own name, but for the account of various central banks, gold in New York, London, and Paris."⁸ The increasing number of central bank deposits in the B.I.S. were also a factor in lessening gold shipments through permitting a further development of the process of transfers by book entries from one central bank to another.⁹

Collaboration with central banks.—The B.I.S. has been

⁸ *Federal Reserve Bulletin*, July 1931, p. 378.

⁹ *Ibid.*

active in promoting collaboration between central banks and considers this one of its chief supplementary functions. Not only are the governors of many of the central banks brought together regularly at Board meetings, but special conferences and contacts are encouraged as well.

In addition to the assistance rendered to Germany in the latter half of 1930, which was mentioned by Mr. McGarrah in his statement concerning the policies of the bank, the B.I.S. came again to the assistance of the Reichsbank, in conjunction with the Bank of England, the Bank of France, and the Federal Reserve banks, by participating with the latter institutions in a joint three months' credit of \$100,000,000 to the Reichsbank in June 1931, at a time when that institution had lost large amounts of gold in connection with a large-scale withdrawal of short-time funds from the German market. As the difficulties of the Reichsbank broke out again in July, this credit was renewed for another three-month period. In addition, at a conference of representatives of Belgium, France, Germany, Great Britain, Italy, Japan, and the United States, held in London in the week of July 20 to discuss the German situation, the B.I.S. was invited to "set up a committee of representatives nominated by the governors of the interested central banks to inquire into the immediate further credit needs of Germany and to study the possibilities of converting a portion of Germany's short-term credits into long-term credits."¹⁰

Naturally, following the general departure from gold in 1931, efforts of this sort were no longer required, but the Bank continued to foster collaboration among central banks in later years to the degree which conditions permitted.

Growth in resources.—The statements of condition reproduced herewith show the resources of the B.I.S. in 1930, 1931 and 1940. The statement for 1940 has been reproduced separately as the form of report has changed somewhat since 1931. The most recent figure, although showing some decline from 1939, indicates that the Bank is still in possession of moderately large resources.

Alteration in functions.—In the summer of 1931, a distinct change occurred in the type of work which was under-

¹⁰ *Monthly Review*, Federal Reserve Bank of New York, August 1, 1931; p. 59.

taken by the B.I.S. The European crises, leading to President Hoover's proposal for a debt holiday, resulted both in a temporary elimination of its reparations functions and in an immobilization of some of its funds. "The Bank transformed itself in a few weeks into a different type of organization. It had been a clearing house and a reparation agent with large liquid funds. It became an advisory body and in a sense an investment trust, handling large loans for distressed Central Banks, which although liquid in form, could not be quickly realized. This work was of greater importance, however, than many of the projects which had been outlined in earlier months. It was certainly entirely different."¹¹

England's departure from the gold standard in September 1931 was followed by a number of other countries, with the result that by the end of the year only a half-dozen countries retained an effective gold standard. This increased the difficulties of the B.I.S., since it was designed (see Statutes) to deal with gold and gold exchange standard countries. Throughout 1932, therefore, the Bank continued to function chiefly as an advisory and co-operative institution, directing its efforts toward a resumption of stable monetary standards as soon as conditions would permit. In March 1933, the United States, following the banking crisis, also definitely departed from the gold standard, although this action, except for a short period, was unnecessary and uncalled for. This left France and a handful of smaller European countries as the sole adherents to a full gold standard when the world monetary and economic conference convened in June 1933.

It was thought in many quarters that the departure of the United States from the gold standard had been permitted by the Roosevelt administration in order to effect a stronger bargaining position at the world conference. This did not turn out to be the case, however. The administration refused to consider any agreement looking toward monetary stabilization in the immediate future. Accordingly, the B.I.S. continued to serve in its latter day capacity of advisory and co-operative agency.

¹¹ Dulles, E., *The Bank for International Settlements at Work*, pp. 411-412.

TABLE XXIV. BALANCE SHEET OF THE BANK FOR INTERNATIONAL SETTLEMENTS — MARCH 31, 1931, AND MAY 31, 1930
(In thousands of dollars)

RESOURCES	March 31 1931	May 31 1930	LIABILITIES	March 31 1931	May 31 1930
I. Cash on hand and on current account with banks	1,397	979	I. Capital:	96,500	96,500
II. Sight funds at interest:	35,952	6,252	Authorized, 200,000 shares, each of 2,500 Swiss gold francs	79,661	59,870 ¹
III. Rediscountable bills and acceptances (at cost):			Issued 165,100 shares	19,915	14,958 ¹
(1) Commercial bills and bankers' acceptances	90,985	24,171	Of which 25 per cent paid up	29,891	38,147
(2) Treasury bills	26,654	19,494	(1) Annuity trust account	14,945	.....
	117,639	43,665	(2) German Government deposit	13,294	.....
			(3) French Government guaranty fund	58,110	38,147
IV. Time funds at interest:	164,184	1,378	III. Short-term and sight deposits:		
(1) Not exceeding 3 months	2,468	1,378	(1) Central banks for their own account —	1,100	.....
(2) Between 3 and 6 months	166,652	.....	(a) Between 3 and 6 months	95,560	.....
V. Sundry bills and investments:	35,663	3,081	(b) Not exceeding 3 months	60,019	5,202
(1) Maturing within 1 year	7,309	2,947	(c) Sight	156,679	.....
(2) Over 1 year	42,972	6,037	(2) Central banks for the account of others —	126,063	.....
VI. Other assets	2,310	120	(a) Between 3 and 6 months	1,014	.....
			(b) Not exceeding 3 months	68,656	.....
			(c) Sight	56,393	.....
			(3) Other depositors —	.....	.....
			(a) Not exceeding 3 months	2,662	.....
			(b) Sight	44	.....
			IV. Miscellaneous items	2,706	.....
			V. Surplus — profit posted for the period from May 17, 1930, to March 31, 1931	1,270	115
Total resources	366,922	58,421	Total liabilities	366,922	58,421

¹ 124,000 shares.

TABLE
BALANCE SHEET
IN SWISS GOLD FRANCS (UNITS OF 0.29032258 . . .)

ASSETS			
I—GOLD IN BARS.....		30,564,120.08	6.5
II—CASH On hand and on current account with Banks.....		34,819,882.44	7.4
III—SIGHT FUNDS at interest....		16,257,974.69	3.5
IV—REDISCOUNTABLE BILLS AND ACCEPTANCES			
1. Commercial Bills and Bankers' Acceptances	93,510,934.14		19.9
2. Treasury Bills.....	68,412,117.53		14.6
		161,923,051.67	
V—TIME FUNDS at interest Not exceeding 3 months.....		17,371,232.96	3.7
VI—SUNDRY BILLS AND IN- VESTMENTS			
1. Treasury Bills	84,809,098.43		18.0
2. Railway, Postal Administration and Other Bills and Sundry In- vestments.....	121,829,515.58		25.9
		206,638,614.01	
VII—OTHER ASSETS.....		2,357,354.72	0.5
<p>NOTE — The Bank holds in bar gold or in currencies free of exchange restrictions assets greatly in excess of its short term and sight deposits (Items IV and V — Liabilities). The remaining assets of the Bank are held in countries whose currencies are now subject to exchange restrictions, but as regards the Bank's assets in those countries, the Governments concerned have, either as signatories of the Hague Agreement of 1930 (Article X) or by special measures, declared the Bank to be immune "from any disabilities and from any restrictive measures such as censorship, requisition, seizure or confiscation, in time of peace or war, reprisals, prohibition or restriction of export of gold or currency and other similar interferences, restrictions or prohibitions" Moreover, after providing for the German Government Deposit out of investments in Germany, over 90% of the assets then remaining are secured by special contracts guaranteeing their gold value.</p> <p>The Bank's commitment in respect of the Annuity Trust Account Deposits is not clearly established, but it is stated at its maximum amount in Swiss Gold Francs.</p> <p>For Balance Sheet purposes the foreign currency amounts of the assets and liabilities have been converted into Swiss Gold Francs on the basis of the quoted or official rates of exchange for the respective currencies.</p>			
		469,932,230.57	100.0

TO THE BOARD OF DIRECTORS AND SHAREHOLDERS

In conformity with Article 52 of the Bank's Statutes, we have examined the and we report that we have obtained all the information and explanations we have is properly drawn up so as to exhibit a true and correct view of the state of the to us and as shewn by the books of the Bank, as expressed in the above-described

Zurich, May 3, 1940.

XXV

AS AT MARCH 31, 1940

GRAMMES FINE GOLD—ART. 5 OF THE STATUTES)

LIABILITIES			
			%
I—CAPITAL			
Authorized and issued 200,000 shares, each of 2,500 Swiss gold francs.....	500,000,000.—	125,000,000.—	26.6
of which 25% paid up.....			
II—RESERVES			
1. Legal Reserve Fund.....	5,117,398.66		
2. Dividend Reserve Fund.....	6,658,510.75		
3. General Reserve Fund.....	13,317,021.48	25,092,930.89	5.3
III—LONG TERM DEPOSITS			
1. Annuity Trust Account Deposits	153,050,000.—		32.6
2. German Government Deposit...	76,525,000.—		16.3
		229,575,000.—	
IV—SHORT TERM AND SIGHT DEPOSITS (various currencies)			
1. Central Banks for their own account:			
Sight.....		31,994,834.22	6.8
2. Central Banks for the account of others:			
Sight.....		1,645,497.74	0.4
3. Other depositors:			
(a) Not exceeding 3 months....	25,881.03		0.0
(b) Sight.....	1,114,010.44		0.2
		1,139,891.47	
V—SHORT TERM AND SIGHT DEPOSITS (Gold)			
1. Not exceeding 3 months.....	1,764,219.48		0.4
2. Sight.....	11,182,591.36		2.4
		12,946,810.84	
VI—MISCELLANEOUS.....		34,575,084.76	7.3
VII—SURPLUS			
Profit for the financial year ended March 31, 1940.		7,962,180.65	1.7
		469,932,230.57	100.0

OF THE BANK FOR INTERNATIONAL SETTLEMENTS, BASLE.

books and accounts of the Bank for the financial year ending March 31, 1940, required and that in our opinion the above Balance Sheet, together with the Note, Bank's affairs according to the best of our information and the explanations given Swiss gold franc equivalents of the currencies concerned.

PRICE, WATERHOUSE & Co.
Chartered Accountants.

The outlook for the future.—The outbreak of war in Europe in 1939 again narrowed somewhat the functions which the B.I.S. could usefully perform. The Bank had to be particularly careful not to engage in transactions which might in any way be considered as partial to any belligerent country. The war also naturally brought about a decline in possible central bank co-operation.¹²

Under such circumstances, the future role of the bank in international monetary and banking affairs is problematical. This was so as early as 1932 when one historian of the Bank's early work saw two possibilities for the future. "One is that the Bank shall become mainly an academic and theoretical center of discussion, a club, a laboratory, a place of meeting. The second is that while fulfilling important functions in bringing together Central Bankers and in disseminating information, it should also have large funds to handle, both for the sake of gaining experience and also because it could exert a larger influence in this way."¹³ Now, with Europe plunged into war, along with other countries, the problem of the future is still more acute.

It is the judgment of the author that, whatever conditions may be, the B.I.S. should be allowed to continue to function as best it can in the expectation that it may prove to be of great service in the post-war era. Meanwhile the Bank can be of service in a limited sphere, and the framework for wider service will be in existence when conditions permit. The excellent international information contained in the Bank's annual reports is alone justification for its existence, especially in view of the probability of greatly enhanced usefulness in the future.

Conclusion.—We are now in a position to consider certain domestic monetary and banking problems, analysis of which requires an understanding of monetary and banking principles and practices. Before considering the essentially monetary problems of the business cycle, credit control, and the standard of value, we shall devote a chapter to a number

¹² For a full discussion of these points see *Annual Report of the Bank for International Settlements*, 1940, Chapter VII.

¹³ Dulles, *op. cit.*, p. 501.

of commercial banking problems which are of considerable importance.

REFERENCES

- Dulles, E. L. *The Bank for International Settlements at Work*. New York. 1932.
- Einzig, P. *The Bank for International Settlements*. London. 1930.
- Einzig, P. *The Fight for Financial Supremacy*. London. 1931.
- Gideonse, H. D. *The International Bank*. New Brunswick. 1930.
- Kisch, C. H. and Elkin, W. A. *Central Banks*, Chapter VIII.
- Myers, D. P. *The Reparation Settlement*. Boston. 1930.
- Annual Reports of the Board of Governors of the Federal Reserve System.*
- Annual Reports of the Bank for International Settlements.*
- Federal Reserve Bulletin.*
- Monthly Review of the Federal Reserve Bank of New York.*
- Proceedings of the American Academy of Political Science*, Vol. XIV, No. 2. Columbia. 1931.

CHAPTER XXXII

COMMERCIAL BANKING PROBLEMS IN THE UNITED STATES

Introduction.—Although there have been problems of commercial banking reform since the beginning of banking in this country, events of the past two decades or so have given rise to certain legislative reforms and proposed changes which are of especial current interest.

Some of these changes and proposed reforms are the result of a long series of bank failures, beginning in 1921, which demonstrated clearly that our banking system was far from satisfactory as far as safety was concerned. Other developments, such as the growth of branch banking, extend back to earlier years, but retain, at present, a large measure of public interest.

In the present chapter, we shall consider first the matter of bank failures and the development of deposit insurance which was the outcome of this host of suspensions. Secondly, the questions of chain, group and branch banking will be given attention. Lastly, certain proposed reforms not yet accomplished, such as the 100 per cent reserve plan, will be described and analyzed.

BANK FAILURES

Number of failures large.—One of the most disturbing features of the banking situation during the pre-depression decade was the unusually large number of bank failures. In the ten years 1921–1930, a total of 6987 banks with capital of \$332,466,000 and deposits of \$2,586,388,000 became insolvent. The failure of approximately 7000 banks in a ten-year period was adequate cause for serious concern.

The dismal record of bank failures, showing the number of banks suspended according to class of bank, capital

BANKING IN THE UNITED STATES 629

TABLE XXVI—BANKS SUSPENDED AND REOPENED, BY YEARS, 1921-1930

Class of Bank and Year	Banks Suspended			Banks Reopened		
	No.	Capital	Deposits	No.	Capital	Deposits
All banks:						
1921	501	\$22,802,000	\$196,460,000	60	\$1,918,000	\$17,493,000
1922	354	13,743,000	110,721,000	65	4,003,000	35,565,000
1923	648	21,943,000	188,701,000	37	1,516,000	11,674,000
1924	776	28,358,000	213,338,000	94	2,815,000	22,462,000
1925	612	24,441,000	172,900,000	62	1,994,000	16,618,000
1926	956	32,804,000	272,488,000	149	5,134,000	60,610,000
1927	662	24,763,000	193,891,000	95	3,906,000	35,729,000
1928	491	19,715,000	138,642,000	39	1,540,000	15,727,000
1929	642	32,254,000	234,532,000	58	3,052,000	25,829,000
1930	1,345	111,643,000	864,715,000	147	6,802,000	61,599,000
<i>Total</i>	6,987	312,466,000	2,586,388,000	806	32,680,000	303,306,000
Member banks:						
1921	70	5,369,000	42,503,000	10	475,000	3,132,000
1922	57	3,956,000	24,243,000	24	1,580,000	11,618,000
1923	124	6,845,000	51,228,000	14	685,000	5,068,000
1924	159	10,305,000	74,469,000	20	860,000	7,190,000
1925	146	9,920,000	67,264,000	14	800,000	6,779,000
1926	160	8,569,000	68,812,000	14	710,000	8,179,000
1927	124	8,034,000	66,336,000	11	845,000	8,311,000
1928	73	5,175,000	42,240,000	5	325,000	6,610,000
1929	81	7,125,000	57,135,000	5	285,000	2,273,000
1930	187	50,410,000	380,440,000	7	450,000	3,538,000
<i>Total</i>	1,181	115,708,000	874,670,000	124	7,015,000	62,698,000
National banks —						
1921	51	3,060,000	21,285,000	8	325,000	2,499,000
1922	45	3,335,000	19,092,000	22	1,330,000	8,076,000
1923	90	4,610,000	32,904,000	11	570,000	3,973,000
1924	122	7,660,000	60,889,000	18	785,000	6,895,000
1925	118	7,970,000	58,517,000	11	700,000	6,300,000
1926	125	6,020,000	47,866,000	10	490,000	4,665,000
1927	91	5,415,000	46,581,000	8	485,000	5,073,000
1928	57	4,200,000	33,619,000	2	75,000	417,000
1929	64	5,095,000	37,007,000	3	160,000	1,607,000
1930	161	19,675,000	171,290,000	5	310,000	1,872,000
<i>Total</i>	924	67,040,000	529,070,000	98	5,230,000	41,377,000
State banks —						
1921	19	2,309,000	21,218,000	2	150,000	633,000
1922	12	621,000	5,151,000	2	250,000	3,542,000
1923	34	2,235,000	18,324,000	3	115,000	1,095,000
1924	37	2,645,000	13,580,000	2	75,000	295,000
1925	28	1,950,000	8,727,000	3	100,000	479,000
1926	35	2,549,000	20,946,000	4	220,000	3,514,000
1927	33	2,619,000	19,755,000	3	360,000	3,238,000
1928	16	975,000	10,621,000	3	250,000	6,193,000
1929	17	2,030,000	20,128,000	2	125,000	666,000
1930	26	30,715,000	207,150,000	2	140,000	1,666,000
<i>Total</i>	257	48,668,000	345,600,000	26	1,785,000	21,321,000
Nonmember banks:						
1921	431	17,433,000	153,957,000	50	1,443,000	14,361,000
1922	297	9,787,000	86,478,000	41	2,423,000	23,947,000
1923	524	15,008,000	137,473,000	23	831,000	6,606,000
1924	617	18,053,000	118,869,000	74	1,955,000	15,272,000
1925	456	14,521,000	105,616,000	48	1,104,000	9,839,000
1926	796	24,235,000	203,676,000	115	4,424,000	52,431,000
1927	538	16,720,000	127,555,000	84	3,061,000	27,418,000
1928	418	14,540,000	96,402,000	34	1,215,000	9,117,000
1929	561	25,120,000	177,197,000	53	2,767,000	23,556,000
1930	1,158	61,211,000	484,275,000	140	6,352,000	58,061,000
<i>Total</i>	5,806	216,758,000	1,711,718,000	682	25,665,000	240,608,000

Source : *Annual Report of the Federal Reserve Board, 1930.*

TABLE XXVII

BANK SUSPENSIONS : NUMBER, CLASSIFIED ACCORDING TO CAPITAL STOCK,
1921-1930

ALL BANKS											
<i>Banks having capital stock of</i>	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	<i>Total</i>
Less than \$25,000....	194	117	295	310	234	384	247	191	223	466	2,670
\$25,000	104	85	151	191	135	230	105	106	143	296	1,606
\$25,100 to \$49,000 ..	31	39	49	55	46	100	60	38	67	140	625
\$50,000 to \$99,000	78	53	91	130	133	164	122	94	120	221	1,206
\$100,000 to \$199,000	47	24	32	61	43	40	47	46	58	131	535
\$200,000 to \$999,000	12	15	16	15	18	16	13	11	19	70	205
\$1,000,000 and over	14	..	..	..	..	..	..	..	5	11	20
Not available ..	31	21	14	5	1	16	8	5	7	10	120
<i>Total</i>	501	354	645	770	612	956	662	491	642	1,345	6,987
NATIONAL BANKS											
\$25,000	23	14	41	44	41	46	31	15	15	56	326
\$25,100 to \$49,000	4	5	10	9	5	20	6	3	6	15	81
\$50,000 to \$99,000	14	13	26	42	46	45	40	24	26	39	315
\$100,000 to \$199,000	9	7	9	19	15	12	12	10	13	30	136
\$200,000 to \$999,000	3	6	4	8	11	2	2	5	3	19	63
\$1,000,000 and over..	..	..	..	..	..	..	..	..	1	4	1
<i>Total</i>	51	45	90	122	118	125	91	57	64	161	924
STATE MEMBER BANKS											
Less than \$25,000 ..	..	..	..	..	1	2	..	..	..	..	3
\$25,000 ..	2	4	11	9	11	5	13	3	4	8	70
\$25,100 to \$49,000	3	5	2	4	1	7	4	2	2	2	32
\$50,000 to \$99,000	7	1	14	10	8	12	4	6	5	5	72
\$100,000 to \$199,000	5	1	4	12	5	7	8	5	5	4	56
\$200,000 to \$999,000	1	1	3	2	2	2	4	..	1	4	18
\$1,000,000 and over..	1	..	..	..	..	..	..	..	..	4	6
<i>Total</i>	19	12	34	37	28	35	33	16	17	26	257
NONMEMBER BANKS											
Less than \$25,000 ...	194	117	295	310	233	382	247	191	223	466	2,667
\$25,000	79	67	99	138	81	179	121	88	124	232	1,210
\$25,100 to \$49,000 ..	26	29	37	42	40	73	50	33	59	123	512
\$50,000 to \$99,000	57	39	51	78	79	107	78	64	89	177	819
\$100,000 to \$199,000	33	16	19	30	23	27	27	31	40	97	343
\$200,000 to \$999,000	8	8	9	5	5	12	7	6	16	48	124
\$1,000,000 and over ..	13	..	..	..	..	..	..	..	3	5	11
Not available ..	31	21	14	5	3	16	8	5	7	10	120
<i>Total</i>	431	297	524	617	466	746	538	418	561	1,158	5,806

1 Includes 1 bank with capital of \$1,309,000.

2 Includes 1 bank with capital of \$1,225,000.

3 Includes 1 bank each with capital of \$1,218,000, \$1,750,000, \$2,500,000, \$4,000,000, \$4,877,000, and \$25,250,000.

4 Includes 1 bank with capital of \$4,000,000

5 Includes 1 bank with capital of \$1,750,000 and \$ with \$25,250,000.

6 Includes 1 bank each with capital of \$1,218,000, \$2,500,000, and \$4,877,000.

stock, and size of town or city of location, is reproduced in the accompanying tables from the Annual Report of the Federal Reserve Board for 1930.¹ The different bases of classification used in the tables will throw some light on the situation which does not appear from a mere recital of totals.

¹ Pp. 131 and 133.

TABLE XXVIII

BANK SUSPENSIONS, BY SIZE OF TOWN OR CITY, 1921-1930

Places with population of	Number of suspensions										Total
	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	
Less than 500.....	181	120	331	335	226	372	266	207	240	142	2,720
500 to 1,000.....	99	75	104	158	130	204	142	93	128	278	1,411
1,000 to 1,500.....	47	23	58	71	67	115	61	48	77	128	695
1,500 to 2,500.....	39	44	55	75	56	88	65	52	63	137	674
2,500 to 5,000.....	33	30	35	55	60	79	53	33	35	119	532
5,000 to 10,000.....	32	18	24	28	32	30	22	18	35	60	299
10,000 to 25,000.....	21	12	14	22	18	22	30	17	24	57	237
25,000 and over.....	49	32	27	32	23	46	23	23	40	124	419
Total.....	501	354	648	776	612	956	662	491	642	1,345	6,987

Source : *Annual Report of the Federal Reserve Board, 1930.*

Analysis of data.—An examination of the data contained in the tables discloses certain interesting facts. In the first place, it is clear that, while member banks of the Federal Reserve System were not free from failures, by far the heaviest mortality occurred among banks of the nonmember group, the suspensions among this class of banks during the decade accounting for over 80 per cent of the total. The second fact of importance is that the great bulk of the failures occurred among banks with small capital stock. Of the total number of failures, more than 60 per cent took place among banks having a capital of \$25,000 or less, while the suspensions of banks having a capital of less than \$100,000 comprised nearly 90 per cent of the total. In the third place, 59 per cent of the banks that failed were located in places of less than 1000 population, while less than 6 per cent were situated in cities of 25,000 and over.

It is clear from these facts that the epidemic of failures was confined largely to small banks operating in small towns or cities. Moreover, many of the suspensions took place in particular sections of the country. The sectional distribution of failures after 1925 is shown in Table XXIX, together with the number of banks in active operation in 1926. Taking the five and one-half years as a whole, 59 per cent of total failures occurred in the West North Central and South Atlantic states, while these same groups of states accounted for 70 per cent of total failures in the four years prior to 1930. These sections include the great staple crop states which were hardest hit by the agricultural depression,

TABLE XXIX

BANK SUSPENSIONS BY SECTIONS, 1926-1930

Section	1926	1927	1928	1929	1930	1931 Jan.-June	Active Banks June 1926
United States.....	956	662	491	642	1,345	684	28,081
New England.....	none	1	1	none	13	1	1,104
Middle Atlantic...	6	10	4	11	30	52	3,343
East North Central	67	91	59	84	286	232	5,819
West North Central	523	308	249	298	413	181	7,737
South Atlantic.....	206	93	105	156	222	75	2,992
East South Central	25	30	15	38	143	74	1,857
West South Central	86	88	44	41	201	40	2,938
Mountain.....	31	19	9	12	25	14	1,034
Pacific.....	12	22	5	12	12	15	1,257

Source: Annual Reports of the Federal Reserve Board 1926-1930. *Federal Reserve Bulletin*, July 1931.

which had been in evidence since the crisis of 1920. In addition, the two sections in question had a population in 1926 of about 25 per cent of the total population of the United States, but operated 38 per cent of all of the banks in the country. The West North Central states alone possessed 27.5 per cent of the total number of banks, while their population aggregated less than 9 per cent of total population.

It accordingly seems reasonable to conclude that the chief causes of the series of bank failures extending over the period of a decade were the depression in certain branches of agriculture combined with a low value of farm property and an overbanked condition in the distress areas. The excessive number of banks, made possible by lax banking laws and insufficient capital requirements, in turn engendered inefficient and unsound management on the part of many country bankers.

Bank failures, 1931-1933.—Although the suspensions of the decade 1921-1930 had been numerous, as has been shown, the deepening depression in business in the years following 1930 led to failures among some of the large city banks as well as to a continuance of a high mortality rate among small country institutions. The Bank of United States, in New York City, was the first important city insti-

tution to close its doors (in December, 1930), and, while the failure of this bank was shown to be the result of mismanagement and fraud, the effect was disturbing to other city banks.

Table XXX below shows the number of bank suspensions by months during 1931-1932. It will be observed that bank suspensions in 1931 established a high record of 2298, with deposits of \$1,691,510,000. In 1932 the number of suspensions, although smaller than in the previous year, still totaled 1456, with deposits of \$715,626,000. The heavy failures near the end of 1931 are probably accounted for by England's departure from the gold standard in September which led to a heavy drain of gold from the United States and a large increase in hoarding within the country. The

TABLE XXX

BANK SUSPENSIONS : 1931-1932

Month	Number			Deposits (in thousands of dollars)		
	Total	Member	Non-mem.	Total	Member	Non-mem.
1931						
January.....	202	26	176	76,553	22,184	54,369
February.....	77	20	57	34,616	13,723	20,893
March.....	86	19	67	34,320	11,007	23,313
April.....	64	20	44	41,683	21,762	19,921
May.....	91	26	65	43,210	17,375	25,835
June.....	167	36	131	100,480	70,802	119,678
July.....	93	18	75	40,745	8,850	31,895
August.....	158	41	117	180,028	84,289	95,739
September.....	305	62	243	233,505	100,718	123,787
October.....	522	125	397	471,380	228,347	243,033
November.....	175	43	132	67,939	32,255	35,684
December.....	358	81	277	277,051	113,216	163,835
1932						
January.....	342	87	255	218,867	74,355	144,512
February.....	131	30	91	57,266	25,554	31,712
March.....	46	7	39	14,760	4,484	10,276
April.....	74	11	63	32,613	14,521	17,092
May.....	82	20	62	34,370	7,500	26,870
June.....	151	48	103	132,661	50,144	82,517
July.....	132	24	108	48,743	19,491	29,252
August.....	85	19	66	29,513	11,873	17,640
September.....	67	16	51	13,508	4,705	8,803
October.....	102	20	82	20,092	6,209	13,883
November.....	93	25	68	45,319	29,582	15,737
December.....	161	24	137	70,914	20,885	50,029

Source of data: Annual Reports of the Federal Reserve Board.

TABLE XXXI. BANKS SUSPENDED AND NONLICENSED BANKS IN LIQUIDATION OR RECEIVERSHIP JAN. 1 TO DEC. 31, 1933, AND NONLICENSED BANKS ON SELECTED DATES IN 1933

Period or date	Number of banks				Deposits ¹ (in thousands of dollars)			
	Total	National	State member	Non-member	Total	National	State member	Non-member
Banks suspended, Jan. 1 to March 15								
January.....	232	44	15	183	134,202	55,938	14,301	63,870
February.....	154	20	7	127	64,701	15,864	7,236	41,600
March 1 to 4.....	24	.....	.....	24	3,288	.....	.....	3,288
March 5 to 15.....	42	2	1	30	15,542	1,381	109	11,052
Total.....	462	66	23	373	217,735	73,183	21,742	122,810
Licensed banks suspended,² March 16 to Dec. 31								
March 16 to 31.....	30	.....	.....	30	25,144	.....	.....	25,144
April.....	30	2	4	30	20,740	4,457	1,600	14,692
May.....	18	1	.....	17	31,047	799	.....	33,248
June.....	15	1	.....	14	24,998	7,911	.....	17,087
July.....	13	3	.....	10	11,032	3,300	.....	7,732
August.....	18	.....	.....	18	14,301	.....	.....	14,301
September.....	15	1	1	13	7,736	870	1,860	4,907
October.....	22	1	.....	21	5,923	144	.....	5,779
November.....	18	.....	.....	18	4,066	.....	.....	4,066
December.....	27	.....	1	26	3,912	.....	67	3,845
Total.....	221	9	6	206	152,538	17,190	3,527	131,521
Nonlicensed banks placed in liquidation or receivership,³ Mar. 16 to Dec. 31								
March 16 to 31.....	95	9	4	82	22,087	2,650	2,701	17,333
April.....	110	7	5	107	63,798	8,091	4,568	51,137
May.....	82	14	8	60	677,228	507,715	142,331	37,182
June.....	77	13	7	57	427,970	24,286	385,674	18,010
July.....	84	20	4	54	89,471	59,182	317	29,942
August.....	114	51	5	58	166,147	72,283	54,075	38,869
September.....	126	66	4	56	142,094	66,021	26,890	39,181
October.....	156	112	4	40	124,014	91,535	17,440	15,050
November.....	102	68	2	32	77,122	67,201	981	8,934
December.....	145	98	2	45	114,160	67,704	21,080	25,376
Total.....	1,100	464	45	591	1,864,700	966,676	464,090	281,034
Nonlicensed banks⁴ (other than mutual savings)								
March 15.....	.....	1,400	221	.....	2,163,595	924,177	.....	.....
April 12.....	4,215	1,108	148	2,959	3,981,232	1,818,541	811,382	1,321,309
June 30.....	3,078	985	110	1,983	2,320,990	1,028,347	217,668	1,063,684
October 25.....	2,301	683	76	1,542	1,561,133	610,463	136,405	817,265
December 30.....	1,905	452	60	1,393	1,202,420	434,978	92,876	674,566

¹ Deposits of national banks suspended or placed in liquidation or receivership are as of the date of suspension or conservatorship, while those of nonlicensed national banks shown in the fourth section of the table are as of the nearest call date; deposits of State bank members are as of the nearest call date; and deposits of nonmember banks are as of Dec. 31, 1932, or as of the nearest available call date prior thereto.

² Includes banks placed in liquidation or receivership and banks placed on a restricted basis; excludes banks reported as having been absorbed or succeeded by, or consolidated or combined with, other banks.

³ Includes nonlicensed banks absorbed or succeeded by other banks.

⁴ Includes 1 bank in April with deposits of \$4,222,000, 1 in June with deposits of \$23,453,000, 2 in July with deposits of \$173,000, 1 in August with deposits of \$49,000,000, 1 in September with deposits of \$3,989,000, and 1 in November with deposits of \$811,000, which did not receive licenses following the banking holiday and withdrew from the Federal Reserve System before being placed in liquidation.

⁵ Banks operating on a restricted basis or not in operation but which have not been placed in liquidation or receivership.

marked improvement early in 1932 is doubtless to be explained by the establishment of the Reconstruction Finance Corporation late in January, while the subsequent deterioration in the banking situation was due, in part at least, to the publication of R.F.C. loans and applications later in the year.

The increase in failures late in 1932 was carried over into the opening months of 1933, as shown by the accompanying tabulation (Table XXXI). A total of 462 banks, with deposits of \$217,735,000, failed between the first of the year and March 15th, the latter being the date on which the last of the licensed banks reopened after their closure during the banking crisis. Although banks controlling a large proportion of the banking resources of the country were operating on an unrestricted basis after March 15, 1933, suspensions continued throughout the remainder of the year. As seen from the table, 221 licensed banks with deposits of slightly more than \$150,000,000 and 1100 nonlicensed banks with deposits of nearly two billion dollars were suspended or placed in liquidation in the last three quarters of the year.

Bank failures since 1933.—The following table (Table XXXII) gives the number of suspensions and deposits of suspended banks by class of bank annually since 1933. While failures have not been eliminated entirely the number each year has been comparatively small. Moreover, as will be observed, the great bulk of the failures has been in the class of nonmember banks of small size. The problem of bank failures, then, while not completely solved, is of less significance at present than during the 'twenties and the great depression.

DEPOSIT INSURANCE

An outgrowth of bank failures.—Although various plans for the guaranty of bank deposits had been tried in a number of different states from time to time and had proven uniformly unsuccessful, the large number of bank failures from 1921-1930 and the still larger number during the depression gave rise to a demand for some sort of national legislation along these lines as a method of preventing heavy losses to depositors.

TABLE XXXII

BANK SUSPENSION ¹ 1933-1941

	Total, all banks	Member banks		Nonmember banks	
		National	State	In- sured ²	Not insured
Number of banks suspended:					
1934.....	57	1	.....	8	48
1935.....	34	4	.....	22	8
1936.....	44	1	.....	40	3
1937.....	59	4	2	47	6
1938.....	55	1	1	47	6
1939.....	42	4	3	25	10
1940.....	22	1	.....	18	3
1941—January.....	3	1	.....	2	.....
Deposits of suspended banks (in thousands of dollars): ³					
1934.....	36,937	40	.....	1,912	34,985
1935.....	10,015	5,313	.....	3,763	939
1936.....	11,306	507	.....	10,207	592
1937.....	19,723	7,379	1,708	10,156	480
1938.....	13,012	36	211	11,721	1,044
1939.....	34,998	1,341	24,629	6,589	2,439
1940.....	5,943	256	.....	5,341	346
1941—January.....	1,056	732	.....	324	.....

¹ Represents banks which, during the periods shown, closed temporarily or permanently on account of financial difficulties; does not include banks whose deposit liabilities were assumed by other banks at the time of closing (in some instances with the aid of Federal Deposit Insurance Corporation loans).

² Federal deposit insurance became operative January 1, 1934.

³ Deposits of member banks and insured nonmember banks suspended are as of dates of suspension, and deposits of noninsured nonmember banks are based on the latest data available at the time the suspensions were reported.

Source: *Federal Reserve Bulletin*, March 1941.

In the early drafts of the Glass bill (which later became the Banking Act of 1933) an attempt to assist depositors of closed banks was made by providing for a Federal Liquidating Corporation. The purpose of this Corporation was to have been to appraise the assets of failed banks and, on the basis of this estimate, to pay to depositors at once a large proportion of what they might expect to get from the final liquidation of the failed bank's assets. The depositor would thus get no more than otherwise, but would have the advantage of getting a large part of it without delay.

This provision did not go sufficiently far to suit Repre-

sentative Steagall, Chairman of the House Banking and Currency Committee, and, upon his insistence, it was changed in the final act to a plan for what was termed deposit insurance. It will be recalled that the Banking Act of 1933 provided for a temporary deposit insurance fund to insure deposits up to \$2500 during the six months, January—June 1934, after which the permanent plan was to be put into operation. The amount available for use in the temporary fund was \$326,000,000, composed of \$150,000,000 subscribed by the Treasury, \$139,000,000 subscribed by the Federal Reserve banks, and \$37,000,000 assessed against the participating banks. This assessment amounted to one-fourth of one per cent of insured deposits, the Federal Deposit Insurance Corporation having the power to levy an additional assessment of not more than three-fourths of one per cent of insured deposits in case of need.

At the middle of February 1934, the records of the F.D.I.C. disclosed that 13,529 banks were members of the temporary fund, that the number of insured accounts was 54,682,092, and that the volume of insured deposits was \$15,483,000,000.² Accordingly, it is clear that the great bulk of the licensed banks at that date were participating in the temporary insurance plan.

Amendment of the law.—As the time approached for the permanent deposit insurance provisions of the Banking Act of 1933 to be put into effect, it was felt that an extension of the temporary fund for another year would be desirable. Accordingly, on June 16, 1934, a law to amend the Banking Act of 1933 in this respect was approved by the President. The amendment extended the temporary deposit insurance plan until July 1, 1935, and advanced the date at which non-member banks, in order to participate in the insurance plan, had to join the Federal Reserve system from July 1, 1936, to July 1, 1937.

The amount of insured deposits for each account was increased from \$2500 to \$5000, except for mutual savings banks which might continue to insure deposits up to \$2500 only if they desired. In order to meet this situation, the F.D.I.C. was authorized to set up on its books a special Fund

² Data from the *Annual Report of the Federal Reserve Board*, 1933, pp. 24-25.

for Mutuals, to be in effect until July 1, 1935. A number of mutual savings banks dropped out of the temporary fund during 1934, chiefly because of the establishment of a state fund for mutuals in New York state.

Extent of protection.—The extent to which individual depositors were protected by the provisions governing the temporary fund on October 31, 1934, is shown in the accompanying table. It will be seen that more than 98 per cent of all accounts in banks belonging to the fund were fully insured, but that only 44 per cent of total deposits were insured. Moreover, as might be expected, the per cent of deposits insured decreased rapidly in inverse proportion to the size of the bank from almost 92 per cent in the banks with \$100,000 or less of deposits to roughly 26 per cent in banks with more than \$50,000,000 of deposits. This relationship became significant in connection with the objections of certain banks to the deposit insurance provisions of the proposed Banking Act of 1935, to be discussed presently.

Criticism of deposit insurance.—After the passage of the Banking Act of 1933, the question of deposit insurance was much in the limelight and the particular provisions of the law aroused much comment, critical and otherwise. Among the critical discussions appearing in print, one of the best was an article by Mr. Guy Emerson in the *Quarterly Journal of Economics*.³ Mr. Emerson made two leading criticisms of the law. The first was that the act failed to provide for building up a reserve fund through annual assessments on the banks to take care of payments in years when bank failures might be exceptionally heavy. Under the law, banks might be assessed repeatedly in periods of heavy bank failures, but there was no provision for a regular annual premium to be paid in both good years and bad.

The second objection advanced against the law was that assessments were not levied on the insurance principle according to the risk involved. Even though patently unsound banks might be prevented from participating in the insurance at all, there would be bound to be different degrees of soundness in the banks subject to benefits under the law.

³ *Guaranty of Bank Deposits Under the Banking Act of 1933*, February 1934, pp. 229 ff.

TABLE XXXIII. FEDERAL DEPOSIT INSURANCE CORPORATION

NUMBER OF BANKS AND ACCOUNTS AND DEPOSITS IN COMMERCIAL BANKS AND TRUST COMPANIES, BY SIZE OF DEPOSITS: OCT. 1, 1934

Deposits	Insured banks					Noninsured banks ²		
	Number of banks	Accounts			Deposits ¹ (in thousands of dollars)		Number of banks	Deposits (in thousands of dollars)
		Total	Fully insured	Ratio fully insured to total (per cent)	Total	Insured		
\$100,000 and under	1,502	616,046	614,460	99.74	99,714	91,403	426	24,116
\$100,001 to \$250,000	3,580	2,738,453	2,726,389	99.56	609,390	539,892	349	55,103
\$250,001 to \$500,000	3,100	4,119,429	4,095,818	99.43	1,108,586	921,653	169	58,642
\$500,001 to \$750,000	1,477	2,995,488	2,974,979	99.32	903,430	720,627	54	32,786
\$750,001 to \$1,000,000	943	2,506,902	2,577,867	99.26	813,367	631,175	27	23,242
\$1,000,001 to \$2,000,000	1,630	6,252,654	6,196,088	99.10	2,278,799	1,700,515	34	46,123
\$2,000,001 to \$5,000,000	1,066	7,508,018	7,432,184	98.84	3,193,457	2,207,934	16	40,264
\$5,000,001 to \$50,000,000	631	12,940,802	12,839,415	98.33	8,026,311	3,978,691	16	223,505
\$50,000,001 and over	90	10,856,922	10,536,778	97.16	18,944,185	4,865,344	16	223,505
Total	14,028	49,725,744	48,995,978	98.53	35,975,239	15,647,231	1,091	512,781

¹ Total deposits as reported to the Corporation on Oct. 1, 1934, differ in some respects from gross deposits shown on bank's published statements and cannot be used as a basis for comparison with deposits on previous dates.

² Number of noninsured banks as of Dec. 1 1934, with deposits on June 30, 1934, or nearest available previous call dates, as reflected in the final 1934 edition of Rand McNally Bankers' Directory.

Source: *Federal Reserve Bulletin*, March 1935, p. 200.

In the circumstances, it would be only reasonable that the less sound banks be assessed at a higher rate.

In short, the so-called "deposit insurance" of the Banking Act of 1933 was not insurance at all, but merely a guaranty of bank deposits parading under a scientific pseudonym. The question then arises as to whether or not real insurance of deposits is possible. In this connection, Messrs. J. H. Taggart and L. D. Jennings, in a study of the question,⁴ showed that an annual premium of $1/10$ of 1 per cent of deposits paid by national banks since 1863, "would have paid, without allowing for interest, all losses experienced by the system prior to October 1, 1931." This record indicates the possibility of insuring deposits in a well-regulated system on the basis of a very moderate cost.

Everything considered, it would seem clear that insurance of bank deposits is feasible, but that insurance principles must be followed if any such plan is to work out successfully in the long run.

Subsequent experience.—Reference to the provisions of Title I of the Banking Act of 1935, as outlined in an earlier chapter (Chapter X), will show that one of the criticisms voiced by Mr. Emerson in the article referred to above was met by the amendment to the law contained in that Title. As thus amended, contributions to the insurance fund by insured banks were to be made in the form of an annual premium of $1/12$ of 1 per cent of average deposits, the premium to be paid in two semi-annual installments.

There is no question but that the change made by the Banking Act of 1935 was an improvement over the original provision in the Banking Act of 1933. It is true that no provision was made for correlating the size of the premium with the risk involved, but the change to an annual premium was probably the most significant single amendment that could have been made. Basing the premium on total deposits instead of insured deposits was unfair to the larger banks, as can be clearly seen from the percentages presented in Table XXXIII, but it was not inimical to the success of the deposit insurance plan.

⁴ "The Insurance of Bank Deposits," *Journal of Political Economy*, August 1934, pp. 508 ff.

Since 1935 the Federal Deposit Insurance Corporation seems to have functioned efficiently and successfully. Complaints have been voiced from time to time about the severity of the requirements of the F.D.I.C. examining staff. It should be remembered in this connection, however, that the future success of the deposit insurance plan rests on keeping the number of bank failures at a minimum. In order to accomplish the latter end, relatively rigid requirements and standards are essential, especially when the premium paid is not graduated according to the risk involved. If the F.D.I.C. continues to maintain high standards, there is little reason to think that deposit insurance, at least up to the present \$5000 limit, will not be successful in the United States.

BRANCH AND GROUP BANKING

Introduction.—Another problem which has come to the fore recently and which, for some years, has played a prominent part in banking discussions is the problem of branch banking. The question of chain and group banking is also closely related and the two may be considered together. In attacking this problem, the situation in foreign countries will first be briefly discussed, followed by an analysis of the advantages and disadvantages of branch as compared with unit banking. Thereafter, the development of branch banking in the United States will be given consideration and, finally, attention will be turned to the question of group banking and its general relation to the branch banking problem.

The situation in other countries.—For a great many years the banks in practically all of the commercially developed foreign countries have operated branch systems. That is, a given bank with its main office in a particular city would establish branch offices for the conduct of its business in various other towns and cities throughout the country. This type of organization is comparable with that generally found in many other lines of business where branches are established in different sections. The extent to which branch banking has been carried in a number of foreign countries may be illustrated by reference to England and Canada. Five English joint stock banks, known as the "Big Five," control

over 90 per cent of the total banking resources of the system and operate in the neighborhood of 8000 branches. Canada now has 10 chartered banks operating somewhere near 4000 branches. In other countries as well a substantial development of branch banking has occurred.

The advantages of branch banking. — From a theoretical point of view branch banking has certain very definite advantages over unit banking. These result, for the most part, from the diversification of business of the bank's borrowers. In the first place, this means that the bank's own loans will be well diversified, with an attendant diminution of risk due to unfavorable factors affecting a particular industry. A second advantage of such diversification in the business of the bank's customers is that the demand for loans will vary from one locality to another, with the result that a surplus of funds in certain sections may be devoted to meeting the peak demand for accommodation in other communities. A result of this should be a tendency toward more uniform interest rates in different sections of the country than would prevail under unit banking. In the third place, a smaller proportional reserve is needed in an extended branch system than in a unit bank, because deposits and withdrawals tend more fully to offset each other in the branch system. The reserves, being under the centralized control of the main office, are then capable of being put to their most efficient use.

From a practical point of view, a branch organization also offers certain advantages. As a result of the control exerted by the main office, loans are more likely to be extended on a sound basis than in a unit bank where personal relations may warp the banker's judgment. Likewise, the employees of a large branch system are apt to be better trained bankers than many of those of the small unit institutions.

Practical drawbacks. — There are, however, certain practical disadvantages of an extended branch system. The habit of promoting employees by transferring them from smaller to larger branches and of sending out branch managers from the main office does not always give satisfactory results. Under this practice, a man may be sent to manage a branch in a territory the economic conditions of which are decidedly different from those with which he is familiar.

He then finds that he must acquire much new banking knowledge before he becomes an efficient manager. By the time this knowledge is attained, he may be transferred to another office. Another drawback is that the branch manager, being necessarily more restricted than the unit banker, at times may not be able to grant loans which are really sound, but which do not meet the requirements of the head office. It is probable, however, that such restrictions on branch managers would be beneficial in preventing bad loans more frequently than they *would prove detrimental* by preventing the extension of sound ones.

Historical development in the United States.—It will be recalled from an earlier chapter (Chapter VI) that both the First and Second Banks of the United States had branch systems that covered the then developed portions of the country. The State Banks of Indiana and Ohio also operated highly successful branch systems throughout their respective states and branch banking was also carried on in *Virginia and a number of other states* with a considerable degree of success.

The National Bank Act of 1864 by implication prohibited the establishment of branch offices by newly organized national banks, and, since the national banking system practically supplanted the state systems for a considerable number of years, branch banking was almost non-existent in the United States. Later in the century, with the re-emergence of state banking systems, the laws of certain states permitted branch banking, but the majority of them were silent on this question. Actually, branch banking was not an important problem until after the turn of the century.

The California banking law of 1909, which permitted statewide branch banking by state banks, was responsible for ushering in the widest development in this country since the Civil War. Although some 10 or 11 other states permitted varying degrees of branch banking at this time, by far the most extensive development occurred in California.

Despite the development of branch banking in California and, to a less extensive degree in other states, the branch banking problem did not attract a high degree of public attention until after the Great War. In the decade of the 'twenties, however, it came to the fore as one of the most

pressing problems of the day. The reason for this was alarm on the part of the Comptroller of the Currency concerning the decrease in the proportion of national banking assets in the banking system, a decrease which he thought largely to be due to the development of branch systems by state banks. Because of this, he urged legislation to permit the establishment of full-power branches by national banks, which legislation finally emerged in the McFadden Act of 1927.

Importance of home city branches.—The agitation about branch banking which developed prior to the passage of the McFadden Act in 1927 was largely concerned with the question of home city branches except in California where statewide branch banking had attained a significant development. The chief cause of concern, as noted, appeared to be the loss of national banking resources to the state systems. Thus the Federal Reserve Board, in its annual report for 1922, pointed out that the establishment of branches by the larger state banks “had gone so far in a few states, notably California, and in a few large cities, including New York, Cleveland, and Detroit, as to reduce greatly the number of national banks,” and the utterances of the Comptroller of the Currency in his 1922 report were in a similar vein. The Comptroller of the Currency had ruled that national banks might, with his approval, establish “teller window” offices within the limits of the home city for the purpose of receiving deposits and cashing checks, but it was claimed that this authorization was not adequate to meet the competition of state banks with power to establish regular branches.

Branch banking provisions of the McFadden Act.—In the controversy surrounding the branch banking provisions of the McFadden Act, emphasis was accordingly placed, in large part, on the question of home city branches. While some observers advocated an extension of branch banking powers of national banks to a statewide basis where state institutions were allowed this privilege, they were distinctly in the minority. The McFadden Act as finally approved, therefore, did not extend the branch banking powers of national banks beyond a citywide basis.

Specifically, the act provided that national banks located in cities of more than 25,000 population might establish

branches within the limits of the home city, provided that state banks were also permitted to establish branches. One branch only might be established in cities with a population of less than 50,000 ; two in cities with a population of more than 50,000 but less than 100,000 ; and any number approved by the Comptroller of the Currency in cities of more than 100,000 population. Any state bank converting into or consolidating with a national bank, or any national bank consolidating with another, might retain all branches that were legally in operation on the date of approval of the act. Finally, any non-member state bank operating branches outside the limits of the home city might join the Federal Reserve System only upon relinquishment of any outside branches established after the date of approval of the act, while member state banks were not permitted to establish additional outside branches after the date of approval of the act under the penalty of forfeiting their membership in the Federal Reserve System.

The obvious intent of these provisions was to confine the branch banking activities of national banks to a purely local territory and to prevent, so far as possible, by indirection the further development of outside branches by state banks. Home city branches are established merely for the convenience of customers, and branch systems of this restricted type have neither the main advantages nor the drawbacks of an extended branch system. In short, home city branch banking is not branch banking in any fundamental sense. The McFadden Act, therefore, was in reality decidedly hostile to branch banking development.

Later developments.—The extent to which the McFadden Act was successful in repressing the growth of branch banking throughout the rest of the decade is shown in Table XXXIV which summarizes branch banking development during the period 1924–1930. Apparently, it had some influence. While the total number of branches in operation increased from 2900 to 3618, or 25.8 per cent, the increase in home city branches—from 1929 to 2740—amounted to 28 per cent. The percentage increase in outside branches was only 18.2 per cent, the number of such branches increasing from 971 to 1148. A similar inference may be drawn from

TABLE XXXIV
SUMMARY OF BRANCH-BANKING DEVELOPMENTS: 1924-1930¹

<i>Class of Bank or Branch, etc.</i>	<i>June 30, 1930</i>	<i>June 30, 1928</i>	<i>Feb. 25, 1927</i>	<i>June 30, 1924</i>
Number of banks.....	23,852	25,950	26,973 ²	28,996
Number operating branches:				
<i>Total</i>	817	835	779	714
Member banks, total.....	334	355	334	299
National.....	165	169	145	108
State.....	169	186	189	191
Nonmember banks.....	473	480	445	415
Size of branch systems: number of banks operating —				
1 branch.....	443	469	446	376
2 branches.....	144	150	127	129
3 to 5 branches.....	132	126	124	176
6 to 10 branches.....	38	35	35	
Over 10 branches.....	60	55	47	
Not classified.....	.....	.....	.....	33 ³
Location of parent bank: number in cities having in 1920 a population of —				
100,000 or more.....	344	372	353	289
50,000 to 100,000.....	78	81	65	108
25,000 to 50,000.....	80	66	61	
Less than 25,000.....	315	316	300	284
Not classified.....	.....	.....	.....	33 ³
Character of systems: number of banks operating —				
Home-city branches only.....	512	526	476	391
Outside branches only.....	256	262	261	281
Home-city and outside branches.....	49	47	42	40
Branches in operation				
<i>Total</i>	3,618	3,230	2,900	2,793
Of member banks.....	2,349	2,161	1,950	1,385
National.....	1,041	941	390	248
State.....	1,308	1,220	1,560	1,137
Of nonmember banks.....	1,269	1,069	950	908
Location of branches: number located —				
In home city of parent bank.....	2,470	2,214	1,929	1,508
Outside home city.....	1,148	1,016	971	785
Establishment of branches: number established —				
De novo as branches.....	2,410	2,214	1,996	.....
By purchase of banks.....	1,060	853	735	.....
No report of method.....	148	163	169	.....

¹ Source: Federal Reserve Bulletin, December 1930, p. 813.² March, 1927.³ Mutual savings and private banks.

the trend of state banking legislation with respect to branch banking. Between 1925 and 1929, the number of states permitting branch banking on a statewide basis declined from 12 to 9, thus indicating an increasing reluctance on the part of the states to permit a full-fledged branch banking development within their borders.

In considering the development of branch and group banking, it will be convenient to divide the period since 1921 into two parts, the first including those years prior to the great depression and the second the years following 1930. The figures for branch banking pertaining to the first part of the period, as presented in the preceding paragraph, do not indicate the real situation for the reason that a significant development of group banking had also occurred during these years. Group banking is tantamount to branch banking in effect, if not in form, so that a clear picture of the situation that prevailed requires a consideration of this type of banking organization.

Group banking. — The term "group banking" is used here to include what is sometimes referred to as "chain banking." The Federal Reserve Board distinguishes three types of chain or group systems as follows :⁵

(1) Instances where control is exercised by a holding corporation, which has usually been formed by interests connected with one or more of the principal banks belonging to the system.

(2) Instances where control is exercised by the principal bank of the system, either through direct ownership of stock by the bank or through ownership by the stockholders or directors of the bank.

(3) Instances of ownership of controlling or substantial interest in a number of banks by an individual, family, or group of individuals.

Whatever the differences in the form of control may be, the object is the same in each case, namely, the operation of a number of ostensibly independent banks as a more or less cohesive unit. Obviously, an extensive development along group lines approximates an expansion of branch banking in a corresponding degree. The following table indicates the extent to which this type of banking was carried on in the United States on June 30, 1930, as compared with June 20, 1929.

⁵ *Annual Report of the Federal Reserve Board, 1930* ; p. 20n.

TABLE XXXV

GROUP BANKING DEVELOPMENT IN THE UNITED STATES
JUNE 30 : 1929 AND 1930

Territory	Number of Banks							
	Total		National		State Member		Non-member	
	1930	1929	1930	1929	1930	1929	1930	1929
Total.....	2,144	1,802	830	647	131	108	1,183	1,047
Statewide branch banking permitted	86	72	46	36	2	4	38	32
Branches restricted as to location.....	538	387	209	143	79	62	250	182
Branches prohibited.	1,242	1,087	437	363	44	36	761	688
No provision respecting branches.....	278	256	138	105	6	6	134	145

Source : *Federal Reserve Bulletin*, December 1930 ; p. 815.

During the year in question the number of groups increased by one, from 288 to 289, but the number of banks in groups showed a more substantial increase from 1802 to 2144. In none of the groups reported is the number of banks less than three, while the largest group operating in June 1930, was composed of 108 banks, and another approached it with 100 banks.

It may readily be seen from the data presented in the table that the largest development of group systems has occurred in those sections where branch banking is either prohibited by law, or where the establishment of branches is limited to the confines of the home city. The inference is that an extension of branch banking powers in these sections would probably result in a diminution in the number of groups operated.

Advantages and disadvantages of group banking.—As compared with unit banking, group banking has advantages which are similar, to a considerable extent, to those of branch banking. As compared with branch banking, on the other hand, the group form of organization has no outstanding merits and a number of decided drawbacks. From the banking point of view, a group system is less subject to continuous and uniform control than is a regular branch system. The

units composing the group are managed by officers and directors as in any unit bank, and while it is true that the directors are dependent on the will of those in control of the group for re-election, it is likely to be more difficult to restrict their actions in particular instances than it would be in respect to the management of a branch.

The chief objection to group banking, however, is from the standpoint of the public. Groups may be made up of national banks, member state banks, and non-member banks, and may include banks operating in two or more states. These various elements of the group are under the supervision of a variety of authorities with diverse methods and standards, and they operate under a number of divergent laws. The difficulty of adequately protecting the public in such circumstances is great. The large branch system operating under one jurisdiction and subject to a single competent examining authority is decidedly to be preferred.

Resources of group and branch systems.—In the preceding survey of branch and group banking developments, attention was directed solely to the number of branches or of banks in groups. While this aspect of the situation is not without significance, it is subordinate in importance to a study of the proportion of banking resources controlled by branch or group systems. Information concerning this phase of the branch and group development is contained in Table XXXVI which gives the amounts of the chief resources (loans and investments) under the control of branch, group, and unit systems on June 30, 1930.

The figures indicate that out of a total of \$58,108,000,000 of loans and investments of all banks, \$30,283,000,000, or over 50 per cent, were controlled by banks in groups or banks operating branches. This exaggerates the extent of the development, however, as it includes those branch systems with home offices only, which are not fundamentally real branch systems. A somewhat more accurate estimate will be obtained if the figure for banks operating branches in the statewide branch banking area is added to the figure for banks in groups. On this basis, the loans and investments of branch and group systems combined amounted to \$14,107,000,000, or just under 25 per cent of the total for all

TABLE XXXVI

LOANS AND INVESTMENTS OF BANKS IN, AND NOT IN, CHAIN OR GROUP SYSTEM,
OPERATING AND NOT OPERATING BRANCHES, BY AREAS: JUNE 30, 1930
(In Millions of Dollars)

Area	All banks	Banks in chains or groups			Banks not in chains or groups		
		Total	Not op- erating branches	Oper- ating branches	Total	Not op- erating branches	Oper- ating branches
United States	58,108	12,019	5,122	6,897	40,089	27,825	18,264
State-wide branch banking	6,524	2,195	236	1,959	4,329	2,241	2,088
Branches restricted as to location	36,843	6,121	1,601	4,520	30,722	14,629	16,093
Establishment of branches prohibited .	13,774	3,470	3,051	419	10,304	10,225	79
No provision regarding branch banking	968	234	234	...	734	733	1

Source: *Federal Reserve Bulletin*, December 1930; p. 816.

banks. This proportion, while lower than the other, is by no means unimportant; and the fact that \$9,825,000,000 of this \$14,107,000,000 represented loans and investments of banks in groups in the territory where branch banking was restricted or prohibited is sufficient to indicate the importance attained by the branch banking problem by 1930.

Branch banking since 1930.—The situation regarding branch banking prior to the great depression, as depicted above, was not greatly changed during the next few years. As a result of the growing interest in the question, the Committee on Banking and Currency of the House of Representatives held extensive hearings on the subject of branch, chain and group banking during the first half of 1930. The findings of the Committee, published in two volumes and fifteen parts, contained much interesting material, but no action resulted from the investigation.

About a year later, however, a subcommittee of the Senate Committee on Banking and Currency, with Carter Glass as chairman, undertook a further investigation on the operation of the national and Federal Reserve banking systems. Much of this inquiry was directed along other lines, but the problems of branch and group banking were considered along with other matters.

The outcome of the deliberations of Senator Glass' committee was the Glass bill, which finally became the Banking Act of 1933. The bill went through five drafts before becoming law, and it is of interest to note that the third draft contained the provision that national banks, wherever located, might establish branch offices throughout the state, or in an adjacent state if within fifty miles of the home office. A filibuster by Senator Long, however, prevented the inclusion of this forward-looking provision in the final act.

The Banking Act of 1933.—The branch banking provisions of the Banking Act of 1933 have been reviewed in an earlier chapter (Chapter X), but may be summarized again here for the sake of convenience. Under this law, national banks were permitted to establish branches in the home city, county or state, provided that state banks were allowed the same privilege. A minimum capital of \$500,000 was required for banks having out-of-town branches, except in states with small population and no large cities where a smaller minimum was specified. In any event, the capital of a national bank with branches had to equal the minimum capital required for a similar number of unit banks situated in the places where the branches were located.

As will be observed, these provisions were considerably less restrictive than those of the McFadden Act, which allowed national banks to establish home city branches only, and then only when state banks were allowed the same privilege. It will now be of interest to determine whether or not the broader provisions of the Banking Act of 1933 contributed, as might be anticipated, to a growth of statewide branch banking.

Recent branch banking development.—The long series of bank failures, discussed in a previous section of the chapter, culminating in the exceptionally heavy mortality of the depression period, resulted in a suspension of a number of banks with branches, although the failures of statewide branch systems were negligible. In any event, at the end of 1933, the number of home city branches had declined to 1784 (from 2470 in 1930) while the number of out-of-town branches showed a much smaller decrease, from 1148 to 1127.

Since 1933, the number of home city branches has varied within a narrow range, declining slightly to 1740 at the close of 1939. The number of outside branch offices, on the other hand, has increased slowly but steadily each year to 1889 at the end of 1939. Based on the number of branches, it would appear that the amendments of the national law in 1933 have led to an increase in statewide branch banking in this country. The same conclusion is to be drawn from the trend of state banking legislation with respect to branches. A study made by the Federal Reserve Board in 1932 showed only nine states permitting branch banking on a statewide basis. The most recent study of the Board, applying to the legal status of branch banking on August 15, 1939, shows that 18 states now permit statewide branch banking, an increase of 100 percent.⁶

Group banking since 1930.—The most recent available report on group banking is that contained in the *Federal Reserve Bulletin* for June 1939, applying to the date December 31, 1938. This report shows that the number of banks in groups had declined from 2144 on June 30, 1930, to 440 on December 31, 1938. Moreover, the number of groups declined in the same period from 289 to 43. It would appear, therefore, that group banking is decidedly on the wane in the United States.

The percentage decline in the number of banks in groups (amounting to 79 per cent) and in the number of groups (85 per cent) is more striking than the decline in group banking funds which was less than 41 per cent.⁷ This is to be expected, as some considerable portion of the decline in group banking activities has been due to failures of banks in groups, and it is natural to believe that the groups remaining would be the larger and stronger ones.⁸ An increase in statewide branch banking and increased federal supervision of groups

⁶ See the author's *The Legal Status of Branch Banking in the United States*.

⁷ This estimate is based on the relation of group banking loans and investments to total loans and investments in 1930, when they amounted to 20.7 percent of the total, and group banking deposits in relation to total deposits in 1938, the latter percentage being 12.3. Although the comparison is, therefore, not absolutely accurate, it is exact enough for our purposes. Moreover, deposits were a better indication of the control of banking funds in 1938 than were loans and investments.

⁸ Between 1930 and 1936, 201 banks belonging to groups, with loans and investments of \$1,115,916,000, suspended operations. See *Federal Reserve Bulletin* for February 1938, p. 101.

may be assumed also to have played some part in the decrease of group banking operations.

A number of the groups now operating have members which operate branch systems, and a number operate banks in more than one state. Of the 52 groups operating at the close of 1936, only ten had banks in more than one state and only seven in more than one Federal Reserve district. Moreover, the greatest proportion of banks in groups continued to be located in states where branch banking was restricted as to territory or was prohibited.

Foreign branches of American banks.—The foregoing pages have been devoted to a consideration of branch and group banking within the United States. A discussion of branch banking, however, may well include a brief review of the development of foreign branches by American banks. The problems presented in this connection are somewhat different from those surrounding domestic branch banking. In the first place, there is little opposition to the establishment of foreign branches. It is solely to domestic branches that the unit bankers are opposed. The establishment of foreign branches may therefore be considered by American bankers purely on the merits of the case without reference to legal opposition.

After the Great War, the leading position attained by New York as a world financial center led to the establishment of a very considerable number of foreign branches by American banks. As pointed out in the preceding chapter, by 1929 sixteen American banks and banking houses had 238 offices in 38 foreign countries. As is apt to be the case with any new development, this movement turned out to be overly optimistic, especially in view of the ensuing depression. Since 1930 the number of foreign offices has decreased substantially. At the outbreak of the war in 1939, the number of financial institutions operating foreign branches had declined to ten, the number of branches to 174, and the number of countries to twenty-nine.

It is of course possible that the progress of the war may result in a further decrease of foreign branches in belligerent countries. On the other hand, some extension of branch banking activities in South American countries is not unlikely.

In any event, prediction is hazardous and no attempt will be made to forecast future developments along this line. It may be interesting, however, to note the distribution of foreign branches by countries just before the outbreak of war in 1939. This information is contained in the accompanying tabulation (Table XXXVII).⁹

Conclusion.—The branch banking question continues to be one of the important commercial banking problems of the day. Although the years since the banking crisis have witnessed a steady increase in the number of out-of-town branches in the number of states permitting statewide branch banking, there still is much opposition to this form of banking organization on the part of many unit bankers, while some thirty states still restrict or prohibit branch banking activities.

From the point of view of the efficiency and soundness of the American banking system, a further development of domestic branch banking is called for. Nevertheless, it would appear to be the better part of wisdom to proceed slowly to the end that such further development should be sound and permanent. A first step might well be the passage of an amendment to the National Bank Act permitting national banks, wherever located, to establish branches on a statewide basis. Such action would doubtless lead practically all of the states which now limit or prohibit branch banking to extend the privilege of statewide branch systems to their banks.

After statewide branch banking had developed and become familiar to both bankers and their customers, an extension of the territorial limits to larger areas than the states would be desirable. One objection to statewide branch banking only is that some states are too small and others lack sufficient diversity of industry to attain the diversification of assets which is one of the major advantages of branch banking. By dividing the country up into larger regions and allowing branch banking throughout these more extended areas, such

⁹ This table and the factual material in the preceding paragraphs are taken from an unpublished paper by Professor C. W. Phelps of the University of Chattanooga, who is the outstanding authority on American banking abroad. The author is greatly indebted to Dr. Phelps for this material. A full discussion of the advantages and disadvantages of foreign branches, omitted here for lack of space, is to be found in Dr. Phelps' earlier book, *Foreign Expansion of American Banks*, pp. 41-84.

TABLE XXXVII

GEOGRAPHIC DISTRIBUTION OF AMERICAN BANKING OFFICES
ABROAD, JUNE 30, 1939

COUNTRY	NUMBER
<i>Europe</i>	
Belgium	5
Denmark	1
England	20
France	12
Germany	3
Greece	2
Holland	2
Italy	35
Spain	2
Switzerland	4
Total	86
<i>Latin America</i>	
Argentina	9
Brazil	4
Chile	2
Colombia	3
Cuba	18
Dominican Republic	6
Mexico	1
Panama and Canal Zone	8
Peru	1
Puerto Rico	7
Uruguay	1
Venezuela	1
Total	61
<i>Asia and Rest of World</i>	
China	12
Egypt	1
India	6
Japan	4
Manchuria	2
Philippines	1
Straits Settlements	1
Total	27
<i>Grand Total</i>	174

diversification could be attained. The use of Federal Reserve districts, or combinations of Federal Reserve districts, suggests itself as a convenient method of determining the boundaries of these larger regions.

An extension of branch banking to a regional basis, as suggested, would destroy much of the motive which now exists for banking chains and groups and would probably lead practically to the disappearance of this latter form of banking organization.

In a country the size of the United States the extension of branch banking beyond the scope of economically diversified regions seems of somewhat doubtful wisdom. In any event, such a development should not be contemplated for many years. Moreover, extension of branch banking even to a statewide or regional basis should be accompanied by adequate capital requirements and efficient supervision to the end that the growth may be a healthy one.

CONCENTRATION OF BANKING

The trend toward larger banks.—Another development which has occurred since 1920 is a trend toward larger banking institutions. The general tendency in this direction may be observed from Table XXXVIII which shows the number and resources of various classes of banks (except private banks) in operation in the United States and possessions annually from 1921 to 1939. Taking the banking system as a whole, resources increased each year from 1921 to 1930, thereafter decreased during the depression, and, finally, increased again by 1940 to a new high point of \$80,214,000,000. Meanwhile, the total number of banks, which reached a peak of 30,104 in 1921, declined steadily¹⁰ to 15,017 in 1940, the average resources per bank increasing from \$1,644,000 to \$5,342,000 during the period in question.

While the general tendency toward larger units is thus clearly recognizable, a more vivid picture of the situation may be obtained by reference to certain additional figures. At the end of June, 1939, there were 6,330 member banks in the Federal Reserve System, amounting to 42 per cent of all banks in the United States and possessions. These banks re-

¹⁰ With the exception of 1933.

TABLE XXXVIII

NUMBER AND RESOURCES OF BANKS IN THE UNITED STATES
BY CLASSES : JUNE, 1921-1940
(Resources in millions of dollars)

Year	All Active Banks		Member Banks		Mutual Savings Banks		All Other Active Banks	
	Num-ber	Re-sources	Num-ber	Re-sources	Num-ber	Re-sources	Num-ber	Re-sources
1921	30,812	49,585	9,745	29,639	623	6,040	20,444	13,906
1922	30,389	50,295	9,892	31,724	619	6,352	19,878	12,219
1923	30,178	53,905	9,856	33,795	618	6,905	19,704	13,205
1924	29,348	57,085	9,650	35,777	613	7,365	19,085	13,943
1925	28,841	61,898	9,538	39,105	611	7,913	18,692	14,880
1926	28,146	64,686	9,375	40,845	620	8,422	18,151	15,419
1927	27,061	67,922	9,099	42,810	618	9,011	17,344	16,101
1928	26,213	71,137	8,929	45,092	616	9,688	16,668	16,347
1929	25,330	71,719	8,707	45,908	611	10,006	16,012	15,805
1930	24,079	73,462	8,315	47,907	606	10,295	15,158	15,260
1931	22,071	69,757	7,782	45,289	600	11,192	13,689	13,276
1932	19,163	57,190	6,980	35,911	594	11,134	11,589	10,145
1933*	14,624	51,294	5,606	33,047	576	10,967	8,442	7,280
1934*	15,894	56,158	6,375	37,385	578	11,065	8,941	7,708
1935	16,053	60,387	6,410	40,725	571	11,173	9,072	8,489
1936	15,803	67,188	6,400	46,534	566	11,409	8,837	9,245
1937	15,580	68,925	6,367	47,469	564	11,645	8,649	9,811
1938	15,341	68,278	6,338	47,169	562	11,572	8,441	9,537
1939	15,146	73,601	6,330	51,908	552	11,799	8,264	9,894
1940	14,017	80,214	6,398	57,846	551	11,952	8,068	10,416

* Licensed banks only.

Sources : *Federal Reserve Bulletin* ; Reports of the Comptroller of the Currency.

ported total resources of \$51,908,000,000, or 70.5 per cent of the total for all banks. Thus, roughly, two-fifths of the country's banks controlled seven-tenths of the banking resources. If mutual savings banks, a specialized type of institution, are omitted from the calculation, the result is even more striking. In that case, member banks constituted 43.7 per cent of the total number and controlled 84 per cent of total resources.

The point of greatest concentration of banking resources is naturally the financial center of the country, New York City. On December 30, 1939, thirty-six New York member banks held total resources of \$16,413,000,000. These thirty-six banks constituted about $\frac{1}{4}$ of 1 per cent of all the banks in the country, yet they controlled over 20 per cent of total banking resources.

Purposes of banking concentration. — The chief method by which the concentration of banking resources is effected is the consolidation of existing banking institutions. Such consolidation may have as its purpose the building up of a branch banking system. An illustration of this is the Bank of Italy (California) which, in March, 1927, absorbed the Liberty Bank of America and the Commercial National Bank of Los Angeles, and in the same month converted to a national bank under the provisions of the McFadden Act. This consolidation gave the Bank of Italy 178 added branches and increased its deposits by \$172,260,087.25.¹¹ Other mergers, chiefly in California, had the same end in view.

Another purpose of consolidation is to prevent the failure of the absorbed banks. A number of instances of this sort occurred in 1930–1931, when the depression in industry brought some banks to the brink of insolvency. The absorption of practically insolvent banks by stronger institutions is justifiable for purposes of maintaining confidence in times of depression, provided that the merger does not unduly weaken the absorbing bank.

A third purpose, and the most significant one in normal times outside of California, is to increase the bank's capitalization and deposits in order to furnish more adequate banking service to its customers. The decade 1921–1930 witnessed a rapid concentration in industry, and it became necessary for the banks to increase their size in order to meet the credit needs of the larger industrial units. Moreover, apart from consolidation to prevent the failure of absorbed banks, many of the failures which occurred during and immediately following the banking crisis of 1933 consisted of small banks which were not absorbed. The remaining banks were naturally larger and, also naturally, increased in size in order to take on the business of customers of small banks that had failed.

While it has been stated that consolidations for the purpose of building up branch systems were confined largely to California, it should not be forgotten that a similar aim was responsible for the development of group banking especially in the 'twenties in other sections of the country. Although

¹¹ *Hearings, H. Res. 141*, p. 1345.

the banks entering groups are not included in the merger figures, a very significant concentration of banking control accompanied the development of group banking. Moreover, there was a very considerable number of two-bank affiliations which do not appear in the figures for banks in groups. Affiliations of this sort are not indicative of a desire to develop branch banking systems, but they are tantamount to mergers for the purpose of developing a more complete banking service.

As a final purpose of bank consolidation, the desire to outdo a rival institution cannot be entirely ignored. When two or three large banks in the same locality each want to be able to claim the largest capital and resources in the community, the attempt either to attain or to hold this distinctive position doubtless leads at time to mergers which otherwise serve no useful purpose.

THE 100 PER CENT RESERVE PLAN

Variety of proposals.—In recent years, probably largely as a result of the heavy bank failures preceding the banking crisis of 1933, a number of plans for 100 per cent reserves have been proposed. These plans vary rather widely as regards details, but their general purport is the same, namely, the maintenance of reserves of 100 per cent against demand deposits subject to check.

The idea of a 100 per cent reserve is not new. The Bank of Amsterdam and other similar institutions,¹² which operated in the 15th century, maintained 100 per cent reserves. These banks simply accepted metallic coin by weight, deducted a certain amount to cover expenses of management, and credited the depositors' accounts with the remainder. The heterogeneous metallic coins thus accepted were then reminted into coin of the realm and held as a reserve (of 100 per cent) against the deposit credits on the banks' books.

Here we have early manifestations of the 100 per cent reserve plan. Modern proposals differ, however, in that the banks would not be required to hold 100 per cent in specie behind demand deposits. In some cases it is proposed that government bonds be deposited with the central bank as se-

¹² Noted in Chapter V.

curity for reserve currency. In others, the central bank, or monetary authority, would take over the commercial assets behind demand deposits in exchange for currency to be held as the 100 per cent reserve.¹³ On the whole, the modern proposals appear to amount to plans for monetizing commercial bank assets, these assets to be carried by the central bank or other monetary authority. The provision of the Emergency Banking Act of March 9, 1933, whereby banks could discount any sound assets at the Federal Reserve banks in exchange for Federal Reserve bank notes has a somewhat similar flavor.

The sponsors of the 100 per cent reserve plan apparently hope to attain two ends by its adoption. The first is the elimination of runs on banks and bank failures such as occurred in the 'twenties and during the great depression. The second is increased business stability. The inability of banks to expand and contract credit as they do under proportional reserve requirements would, it is felt, sharply limit business fluctuations.

On the first score — that of preventing runs and failures — the plan has some merit. Obviously, if depositors know that the banks are maintaining 100 per cent reserves against their deposits, they will not be worried at any time about their ability to withdraw their deposits at will, even in bad times. It would seem, however, that equally satisfactory results along this line can be accomplished through a sound system of deposit insurance, and with much less disruption of the existing banking set-up. Moreover, most of the plans do not provide for 100 per cent reserves against time and savings deposits. Many of the failures of the depression resulted from withdrawals of time deposits as well as deposits payable on demand. Consequently, the 100 per cent reserve plan might prove to be less effective than deposit insurance, which covers both classes of deposits.

As regards the value of 100 per cent reserves as a business stabilizer, the author is frankly skeptical. Most of the plans, as noted above, advocate 100 per cent reserves against demand deposits only. In such a case, time deposits and loans

¹³ See Watkins, L. L., *Commercial Banking Reform in the United States*, and an article by R. G. Thomas, 100 "Per Cent Money," in the *Am. Ec. Rev.*, June, 1940, for more extended comments on the 100 per cent reserve plan.

based on them, could expand and contract with business fluctuations. If 100 per cent reserves were required against all deposits, doubtless business enterprises would take over the function of extending commercial credit. Trade credit already plays a significant role in business fluctuations and the probabilities are that the importance of that role would be considerably enhanced under the 100 per cent reserve plan.¹⁴

Before leaving this problem, it should be pointed out that the 100 per cent reserve plan, if adopted, would introduce an extremely radical reform into our banking system, which would result in great confusion to bankers and more expensive banking service to the community at large. If the plan was certain of accomplishing the high aims sometimes attributed to it, no objection could be legitimately raised to it on the score of disruption and confusion of existing arrangements. Since such certainty is decidedly lacking, however, this must be considered as a definite objection to the widespread adoption of the plan.

A compromise plan which would be sound theoretically and could be introduced in practice with a minimum of disturbance would be to require demand deposits to be offset on the asset side of the bank statement by commercial or business paper and reserves only.¹⁵ As commercial loans decreased, reserves would have to go up, and vice versa. Thus check currency could be created only through commercial borrowing, a procedure which would greatly assist the control of credit by the central banking authorities.

GOVERNMENT COMPETITION

Extent of government lending.—Most of the loans made by government agencies have been extended by the Reconstruction Finance Corporation, the Home Owners' Loan Corporation and various agencies of the Farm Credit Administration. Total assets of all governmental and credit agencies on December 31, 1940 amounted to the large sum of \$12,500,000,000, as shown in the accompanying table. It is not

¹⁴ For an elaboration of these criticisms, see the excellent article by R. G. Thomas previously cited. Other features of the 100 per cent reserve plan in relation to business stability are to be found in E. C. Bratt, *Business Cycles and Forecasting*, pp. 552-555.

¹⁵ The reason for this will be apparent upon a study of Chapter XXXV on Future Possibilities of Credit Control.

TABLE XXXIX

GOVERNMENTAL CORPORATIONS AND CREDIT AGENCIES, DECEMBER 31, 1940

[Based on compilation by U. S. Treasury Department from reports received from organizations concerned. In millions of dollars]

	Reconstruction Finance Corporation and Public Works Administration	Home mortgage and housing agencies			Farm credit agencies				Inter-see Val-ley Au-thor-ity	In-sur-ance agencies	Other	Total		
		Home Owners Loan Corporation	Other mortgage agencies	United States Housing Authority	Farm mortgage agencies	Other farm credit banks and corporations	Commodity Credit Corporation	Other				Dec. 31, 1940	Nov. 30, 1940	Dec. 31, 1939
<i>Assets</i>														
Loans and preferred stock:														
Loans to financial institutions	225		201			61		(1)		59	1	455	469	444
Preferred stock, etc.	152	104	27								30	736	739	816
Loans to railroads	486											516	515	500
Home and housing mortgage loans		1,056	45	18								2,390	2,387	2,365
Farm mortgage loans					2,500	287	280	184			4	2,500	2,508	2,506
Other agricultural loans	(1)							3,414			4,100	757	772	1,130
All other loans	2,415		(1)									1,205	1,291	1,100
Total loans and preferred stock	1,000	2,151	477	186	2,500	310	280	628		59	445	8,682	8,680	8,951
Cash	5	189	47	50	100	01	2	14	9	41	17	533	549	460
U. S. Govt. direct obligations	49		50	5	85	92				430	5	701	599	758
Obligations of Government credit agencies:														
Fully guaranteed by U. S. Government			13			10				105		128	128	130
Other	8				51	12						22	24	41
Accounts and other receivables	20	7	6	2	211	(1)	67	29	6	63	69	491	513	379
Business property	1	3	(1)	128	0	(1)	6		351	1	97	593	601	549
Property held for sale	-2	357	1	(1)	88	(1)	570	(1)		39	43	1,141	1,113	601
Other assets.....	3	11	(1)	(1)	9	26		5	(1)	11	157	211	210	133
Total assets other than interagency ^a	1,742	2,709	582	370	2,007	553	526	676	305	749	833	12,500	12,518	12,062

	Recon- struction Finance Corporation and Public Works Admin- istration	Home mortgage and housing agencies			Farm credit agencies				Ten- nes- see Val- ley Au- thor- ity	In- sur- ance agen- cies	Other	Total		
		Home Owners' Loan Corporation	Other mort- gage agen- cies	United States Hous- ing Au- thority	Farm mort- gage agen- cies	Other Farm Credit Admin- istrations	Com- modity Credit Corporation	Other				Dec. 31, 1940	Nov. 30, 1940	Dec. 31, 1939
Liabilities														
Bonds, notes, and debentures:														
Guaranteed by United States	1,007	2,615	176	226	1,270	201	696	..	..	13	..	5,917	5,919	5,704
Other ¹	201	11	34	6	8,905	8	129	221	8	4	12	1,395	1,422	1,348
Other liabilities (including reserves)		7			116				7	248	89	1,214	1,237	995
Total liabilities other than interagency ²	1,389	2,682	209	232	9,380	209	825	221	15	265	100	8,526	8,579	8,048
Excess of assets over liabilities, excluding interagency transactions	354	25	373	137	617	345	101	455	359	484	733	3,074	3,039	4,014
Privately owned interests			56		216	4				139	..	415	413	397
U. S. Government interests	354	25	317	137	401	341	101	155	359	345	733	3,559	3,526	3,617

¹ Less than \$500,000. ² Includes \$90,000,000 loans of Public Works Administration.

³ Includes \$375,000,000 loans of Farm Security Administration.

⁴ Includes \$249,000,000 loans of Rural Electrification Administration.

⁵ Excludes Federal land bank bonds held by Federal Farm Mortgage Corporation.

⁶ Includes, however, investments in securities of agencies (other than mentioned in footnote 5) and deposits of agencies with Reconstruction Finance Corporation.

NOTE.—For explanation of table, see BULLETIN for October 1938, p. 882.

surprising under the circumstances that there should have been complaints from time to time of government competition with commercial banks, and that this should be considered one of the problems which the banks have to face.

As a matter of fact, analysis of the table indicates that the problem is not of great moment as far as *commercial* banking is concerned. Aside from the Reconstruction Finance Corporation figures, the really big totals are those of home mortgage and housing agencies and farm mortgage agencies. Such business doubtless competes with that of savings banks and departments, but it is not a competitive factor in the commercial banking business.

Moreover, the rather large assets of the R.F.C. do not indicate much competition. Nearly \$700,000,000 consists of loans to the banks themselves or holdings of preferred stock in banks. It is extremely doubtful if R.F.C. loans to railroads are of the type a well-managed commercial bank would want to handle, and it is probable that this would be the case with many of the other loans listed in the table.

It would seem that banks in agricultural areas may suffer more from competition of government credit agencies than any other group. Even in this case, however, many of the loans extended could not be safely handled by commercial banks. It may be concluded, then, that competition of governmental agencies is not as serious a commercial banking problem as might appear at first glance.

In conclusion it may be noted that the banks do indirectly furnish a large share of the funds used by government agencies through the purchase of government direct and guaranteed securities, Federal land bank bonds, etc. The banks can have no objection to this where no competition is involved. If there is competition, however, the banks lose lucrative business to the government agencies while, at the same time, furnishing the funds loaned through the purchase of low-yield securities.

Conclusion.— It is not pretended that the foregoing pages have dealt with all commercial banking problems, numbers of which are considered at other points in the text. The ones that have been here discussed, however, are those which are significant to the commercial banks today and which do

not fit naturally in other connections. In the following chapter, we shall turn our attention to a monetary problem, namely, the relation of monetary policy to the business cycle.

REFERENCES

- Cartinhour, G. T. *Branch, Group and Chain Banking*. New York. 1931.
- Collins, C. W. *The Branch Banking Question*. New York. 1926.
- Fisher, I. *100% Money*. New York. 1935.
- Lawrence, J. S. *Banking Concentration in the United States*. New York. 1930.
- Myers, M. G. *Monetary Proposals for Social Reform*. New York. 1940.
- Ostrolenk, B. *The Economics of Branch Banking*. New York. 1930.
- Secrist, H. *National Bank Failures and Non-Failures, 1925-1932*. Bloomington. 1932.
- Southworth, S. D. *Branch Banking in the United States*. New York. 1928.
- Watkins, L. L. *Commercial Banking Reform in the United States*. Ann Arbor. 1938.
- Annual Report of the Comptroller of the Currency*. 1929.
- Annual Report of the Board of Governors of the Federal Reserve System*. *Federal Reserve Bulletin*.
- Hearings on Branch, Chain, and Group Banking*, H. R. 141.
- American Economists Council for the Study of Branch Banking (New York):
- Bradford, F. A. *The Legal Status of Branch Banking in the United States*. 1940.
- Chapman, J. M. *Bibliography on Branch Banking*. 1939.
- James, F. C. *A Colloquy on Branch Banking*. 1939.
- Megrah, M. *The Organization and Functioning of Branch Banking in England and Wales*. 1941.
- Westerfield, R. B. *Historical Survey of Branch Banking in the United States*. 1939.

CHAPTER XXXIII

MONETARY POLICY AND THE BUSINESS CYCLE

Introduction.—In the preceding chapters on the value of money attention has been directed chiefly to the forces which determine that value. The implication of those chapters has been that rapid changes in the value of money are undesirable, and it may now be asked why this should be the case. The answer is that changes in the value of money result, not in equal changes in all prices, but in a maladjustment of economic relationships within the price system which it is desirable to avoid in so far as it is possible to do so. The internal changes in the system of prices which are presumably effected by changes in the price level destroy the equilibrium of the price system and prevent it, supposedly at least, from properly regulating the consumption and production of goods.

It is the purpose of the present chapter to examine at some length these internal changes in the price system and to try to ascertain, as a result of this examination, the real relationship which exists between such changes and alterations in the general level of prices. Since internal instability of prices of the sort mentioned is closely bound up with that changing round of business activity known as the business cycle, we shall best approach our problem by first describing the outstanding characteristics of the business cycle. Having done this, we shall be in a position to attack the problem of the relationship of the business cycle to the value of money.

THE TYPICAL PRE-WAR BUSINESS CYCLE

A definition of the business cycle.—*The business cycle is the general designation given to the round of business activity which traverses a series of recurring phases, usually in the same order, but of irregular duration.* Each of these phases of business activity blends into the succeeding one, but each

has a sufficient number of distinct characteristics to permit its designation as a separate aspect of the complete phenomenon. It seems possible to distinguish four such phases as follows : *depression, revival, prosperity, and recession.*

Depression.— Since the four phases of the cycle follow each other in order repeatedly, it is impossible to point to any phase as constituting the beginning or the end of the cycle. In describing the cycle, however, it is necessary to break into the circle somewhere, and we shall begin the description with the period of depression. The depression phase of the cycle is characterized by a low level of prices in both the commodity and security markets, large bank reserves with attendant easy money conditions, considerable unemployment, and a relatively low degree of productive activity.

Low productive activity and unemployment are especially marked in the heavy industries—steel, construction, etc.—and this gives rise to severe unemployment in the service industries as well. Production and employment in the industries manufacturing consumers' goods, on the other hand, are well maintained during the depression, although wages are, of course, lowered and the prices at which these goods are sold are not usually profitable.

Revival.— After a longer or shorter period, productive activity will begin to increase and business will then have entered the stage of revival. The recovery from depression may be the result of a number of factors. Chief among these, typically, is the revival of long-term financing in the investment market. The proceeds of new bond issues are used to modernize and rehabilitate plant and equipment which has been allowed to run down during the depression and, in some instances, actually to enlarge existing equipment and plant. The expenditure of these funds directly increases productive activity in the heavy industries where unemployment has been most severe. Re-employment in the heavy industries increases the demand for products of the service industries and puts men back to work in those lines of trade. From then on, the forces making for recovery are cumulative.

Just why the revival of investment takes place at a particular time it is impossible to say. Sooner or later, however, the forces at work during the depression will bring about a

state of affairs that makes such investment seem favorable. In the course of the depression, wages and other costs have been reduced, so that business men are able to offer goods on the market at attractive prices. After inventories acquired during the period of prosperity have been liquidated, and prices of goods have become stabilized at a low level, consumers, convinced that the prices of goods have reached rock bottom and that no better bargains are to be hoped for, will begin to purchase goods in somewhat larger amounts. This pick-up in demand, combined with rising stock prices, tends to make business men more optimistic about the future. Once they feel that there is really some chance of marketing their goods at a profit, they become interested in putting plant and equipment into good condition, or even in expanding it at the low prices which prevail.

Moreover, the financial situation is usually favorable to new capital financing. During the depression, the banks customarily invest their surplus funds in high grade bonds and other investors, seeking safety, do likewise. This strengthens the bond market and permits the flotation of new issues at low rates of interest. Discount rates at the banks are also low, with the result that business men, expanding their production and inventories, are able to obtain working-capital loans at low cost. Under these circumstances, as soon as the liquidation of the depression has ceased, revival is almost certain to set in.

For quite a period after revival has commenced prices will not rise appreciably. Costs are always substantially reduced during the depression and business may thus be carried on profitably at the low level of prices then prevailing. As demand increases, however, retailers and wholesalers who have let their inventories run down in the depression period will increase their demand for goods from the manufacturers, not only to the extent necessary to meet the increase in consumer demand, but to build up their inventories as well. This added demand will cause prices to rise and merchants then increase their orders still more rapidly in order to be able to hold goods for higher prices. As the cost of living rises, laborers strike for, and obtain, higher wages, manufacturing costs go up, and a further increase in prices is in order.

Revival has merged into what is termed business prosperity.

Prosperity.—The stage of prosperity is simply a continuation of the revival phase of the cycle. As business activity increases, the demands of business men for loans also enlarge. In order to meet the demands of their regular customers, the banks withdraw funds from the security markets where they have been on loan to speculators, and also raise their discount rates in order to protect their reserve position by preventing too rapid an expansion of loans. This shifting of funds from the security to the commercial and industrial loan markets results in a sharp rise in the rates for money in the former market with a resultant curtailment of speculative activity. The increased industrial activity with its accompanying rise in the prices of commodities will result in demands on the part of labor for higher wages. When labor is fully employed and in active demand, employers are loath to have production interrupted by strikes, and such wage demands are usually granted, at least in part. Wages do not, however, tend to rise in the same degree as commodity prices nor do they often rise as rapidly as does the level of prices of commodities. Interest rates also rise, in both investment and commercial loan markets, but often the rise is not so rapid—during the stages of late revival and prosperity—as the rise in the prices of finished products. Many producers, also, have long-term leases or contracts the rental or payment on which does not rise at all. Consequently, *although costs do rise, the increase is not in proportion to the rise in the prices of products.* This explains the stimulation offered to business men by a rising commodity price level, and their desire to stock up heavily with goods before commodity prices rise to still greater heights.

With the initial rise in prices in the latter part of the period of revival comes a demand for additional plant and equipment and a period of great prosperity for the building trades. Funds for new building are obtained largely from the investment market and, with a copious supply of investment funds available, the cost of obtaining new plant and equipment is low. As the demand for capital increases during the period of prosperity, the rates in the investment market for loans

also increase. There is also another reason for the higher rates on investment loans. A vast mass of securities, representing investment funds, is continually being carried by speculators on the stock market on funds borrowed from the commercial banks. As business men increase their demands for commercial and industrial loans, some of these funds are withdrawn, which aids the tendency toward increased tightness in the investment market. In spite of this, there is a strong demand for equipment which continues throughout the period of business prosperity.

Higher costs of doing business.—As the cycle progresses, prosperity develops certain stresses in the economic structure which should serve as a warning that the end of the period is in sight. One of these is the higher cost of doing business. After existing plant and equipment are fully used, increased production can take place only at increased costs per unit produced. Old leases and contracts, made in favorable circumstances, expire and have to be renewed at higher prices. Actual operating costs also increase rather rapidly. Among the most important of these, in many lines, is the cost of labor. Labor costs are greater because of higher money wages (with extra pay for overtime work), and, especially important, because of decreasing labor efficiency. Overtime work, under the best of conditions, is less efficient than regular time work because the laborer is more or less exhausted after his regular day's work. But the inefficiency is not confined to overtime work. In periods of full employment, with business men eagerly competing for the existing supply of labor, all laborers tend to become less efficient and to "do as they please" because of the numerous opportunities for employment elsewhere if their present employers are not satisfied with the way they do things. This attitude on the part of laborers of course results in higher real costs for the labor factor in production. Besides the problem of labor costs, increased operating expenses confront the business man from the capital side. Old and normally obsolete machinery is brought into use in order to meet the ever-increasing demands for goods, and this can only mean higher costs for the goods produced with the aid of such antiquated machinery.

Stringency in the loan markets.—Growing stringency in the investment market and in the market for short time loans forms a second strain. Projected investments in plant may have to be abandoned because of high rates and a scarcity of available funds in the market for investment loans. This results in a partial falling off in employment in the building trades even at a time when the business world in general may appear to be highly prosperous. This beginning of unemployment, though slight, does result in some decrease in the consumers' demand for goods, and makes further increases in the price of consumers' goods more difficult. In the commercial loan market, those on the supply side—the banks—become somewhat uneasy about their diminishing reserve ratios, and raise rates sharply to prevent the further expansion of loans. They may even demand payment of certain loans when they fall due, and confine their extensions of credit to their own regular customers. Bank rates, then, tend to rise more sharply than the prices of finished goods when this stage of the cycle has been reached and this helps to cut down the diminishing margins of profit between cost and selling price. The intense demands of business for added loans tend toward the withdrawal of increasing amounts of funds from the security markets, with a resultant further curbing of speculative activity on those markets and a downward turn in stock prices. The withdrawal of funds from the speculative markets, as noted, helps to intensify the already existing stringency in the investment market and aids in the curtailment of new construction projects.

Fictitious demand for goods.—Still another set of circumstances may develop to add to the growing maladjustment of the parts within the business structure. Many manufacturers, in a period of boom production, are unable to fill at once all the orders for goods which they have received and so resort to an allocation of their output among their various customers. Retailers and wholesalers, upon finding that their orders can be filled only in part by one manufacturer, may resort to a duplication of orders by placing the full order with more than one manufacturer in the hope that the amounts allotted to them on the different orders will be sufficient, all told, to satisfy their original demands. The manu-

facturers naturally receive an entirely exaggerated and fictitious notion of the real demand for their products and proceed to make plans for the filling of these large forward orders, many of which do not represent any real demand on the part of consumers. Besides this fictitious demand, more difficulties may devolve upon the manufacturers *if the transportation system of the country is unable to handle the actual shipments of goods in a rapid and efficient manner*. Failure to make prompt deliveries results in inability to continue collections at the proper rate and makes necessary certain added demands for credit to carry the goods in process of shipment, and at a time when the banking system is likely to be strained to the utmost.

Inability to raise prices.—Added to all these unfavorable factors is the inability of business men to raise the prices of consumers' goods by the amount necessary to maintain the earlier margins of profit. The reasons for this are several. The partial decrease in consumers' demand because of unemployment in the building and equipment industries has already been mentioned. In addition, certain prices are more or less rigidly fixed by law or custom. Doctors and lawyers have set fees for their services which are difficult to change with any degree of rapidity. Teachers are kept on a given salary scale for years regardless of the short time fluctuations in commodity prices. The salaries of clerks and executives, while they may increase, do not rise to anything like the extent of the increase in the prices of goods. Wages, as has been noted, do not rise with a degree of rapidity comparable with that of the commodity price level. The individuals in question, therefore, are not able to demand so many goods as formerly. In the public utility industries, at times, the prices which may be charged are rigidly set by law, while the costs of labor and capital are no less for these concerns than for non-regulated industries. Even when public utility commissions are given the power to adjust rates from time to time, they are invariably slow in making adjustments, which works to the detriment of the utility in times of rising costs. While such industries must continue to operate and pay the necessary costs as a matter of public convenience, their owners are suffering from diminished in-

comes on their investment, which cuts their purchasing power over other goods.

It may be objected to all this that the fortunate business men who have succeeded in raising their prices are receiving large profits which should enable them to exert a demand for goods sufficiently large to offset the decrease in demand on the part of the other less fortunate members of the community. The only difficulty here is that the former group have a large surplus after satisfying their major wants. Finding high rates in the investment market, and confronted by the aforementioned exaggerated demand for goods, they are likely to invest this surplus income in their own plants in order to fill orders for goods, a demand for which does not really exist. In other words, production is misdirected to the extent that goods are being produced at high costs in larger quantities than can be absorbed at prices high enough to cover these costs and leave a satisfactory margin of profit.

Recession. — As consumers' demand falls off, or at least fails to keep pace with the increase in costs, merchants find it increasingly difficult to turn over their inventories rapidly and are therefore unable to make prompt payment to their creditors. Their own collections have probably slowed down and they begin to worry about their financial position and their debts at the bank and to other business men. It is at such times that business men begin to desire money, as such, more than additional goods. The least shock to the unstable business structure is sufficient to make the demand for money effective and bring about a large scale liquidation of goods with attendant falling prices. The failure of some prominent bank or business house at such a time is usually sufficient to cause sacrifice prices. After the initial fall of prices, some uncanceled orders may remain* to be filled, although probably not many. These will be taken care of, and then production will be curtailed, men discharged, and, finally, debts paid. Many business houses are likely to fail in the course of the liquidation, but, with the proper sort of banking system, the sound ones will be carried over and will eventually pay their debts in full. With the repayment of loans, bank reserves increase, and the banks will again lower their discount rates in an attempt to increase their profits

through expanding their business. Surplus funds will flow into the speculative markets and the rate on call loans will be low. Bond prices, of excellent issues, will be fairly high in view of the low money rates, and speculators in the stock market will be looking for some signs of revival in order to purchase stocks while prices are low and call money is cheap. This brings us back to the stage of depression with which we started.¹

POST-WAR CYCLES

Business activity since the war.—The pattern of business activity since the Great War has differed somewhat from the typical pre-war cycle as described in the foregoing pages. During the War the United States experienced a period of pronounced business prosperity with active production and a marked advance in prices. Shortly after the signing of the Armistice, the business of the country experienced a temporary recession with somewhat depressed business conditions following in the first part of 1919. This recession and depression resulted from the readjustment from a war to a peace basis. Numerous restrictions which had been in force during the War were removed, the production of war supplies gave way to peace-time production, and returning and discharged soldiers were anxious to be reinstated in their old jobs or to find new ones. It was unavoidable that some readjustment should take place. But the period of depressed business did not last a great while. The population of the country, freed from the restrictions on their spending which the war conditions had imposed and possessed of large quantities of liberty bonds which could be readily turned into cash, set out upon an orgy of extravagant expenditure which revived business activity in rapid fashion and permitted the absorption of the great mass of returning soldiers into industry.

Reserve banks impotent to curb expansion.—From this point on, the course of the typical pre-war cycle was followed closely. Business prosperity entered a period of strain with

¹ The foregoing description of the typical business cycle follows rather closely, in broad outlines, that contained in W. C. Mitchell's first book on *Business Cycles*. Other sources which have been drawn on are cited in the bibliographical note at the end of the chapter.

its attendant stresses and maladjustments. In one sense, the situation was different from that prevailing in any of the pre-war cycles. The Federal Reserve system had been established in 1914, and the control of credit was largely in the hands of the Reserve banks and the Federal Reserve Board. In order to facilitate Treasury financing operations, the Reserve banks had maintained artificially low discount rates throughout the entire war period, and it was not until late 1919 that they were released from the dominance of the Treasury policy. For a considerable portion of the post-war period of expansion, therefore, the discount rates of the Federal Reserve banks were artificially held down. Thus one of the usual stresses—increased stringency in the money market—failed to develop as it would have done had not the Reserve banks been subject to the financial policy of the government. This merely exaggerated the other maladjustments in the business structure, so that, when the Reserve banks finally raised their discount rates in late 1919, and again in early 1920, the period or stage of crisis was brought rapidly to a head.

Events following 1920.—The crisis of 1920 was severe, but the presence of the Reserve banks, ready to extend credit to basically sound enterprises through member banks, prevented a panic from developing and allowed an orderly liquidation and readjustment to take place. Then followed the usual period of depression which lasted into 1922. After the recovery from this depression there ensued a long period of substantial prosperity, lasting until 1929, but broken by minor recessions in 1924 and 1927. This era, however, differed from the typical period of prosperity described above in that the commodity price level remained comparatively stable. Merchandising was carried on on a hand-to-mouth buying basis, speculation in inventories being conspicuously absent.

On the other hand, a number of real estate booms developed, the one in Florida constituting the leading example, while a bull market in stocks, beginning in 1924 and culminating in the stock market crash of October 1929, broke all recent records for speculation in equities. The prosperity of the period centered largely in the manufacturing indus-

tries and consequently benefited chiefly the urban population. Agriculture, on the contrary, was in the doldrums during these years.

Following hard on the heels of this long and generally prosperous period came a recession and depression of great severity. Beginning in the latter part of 1929, commodity prices, productive activity and security prices fell intermittently until the late summer of 1932, while unemployment, business insolvencies and bank failures increased. After a temporary stiffening of markets and prices in 1932, bank failures and hoarding again increased, continuing into 1933 and ending with the banking crisis of March 4 of that year.

The settlement of the banking crisis marked the low point of the depression in the United States. Between February 1933 and the same month in 1935, wholesale commodity prices rose from 59.8 (1926=100) to 79.5, or 33 per cent. In the same two years the index of the general price level of the Federal Reserve Bank of New York rose from 124 (1913=100) to 142, or 14.5 per cent. The index of manufactures, which stood at 56 in March 1933, had risen to 86 two years later. The index of minerals rose from 81 to 97 in the same period.

The post-war pattern.—Although the description of business movements since the War, as portrayed in the preceding paragraphs, does not coincide in all particulars with the earlier description of the typical pre-war business cycle, it is nevertheless true that these movements do fit into the pattern of post-war cycles in the past. The analysis of the typical post-war business pattern, with particular reference to the United States, has been clearly and forcefully presented by Colonel Leonard P. Ayres in the following paragraphs:²

SEQUENCES

THE World War stimulated almost universal business activity while it was under way and for a short subsequent period, and then brought world-wide depression. It also created the conditions of ardent nationalism, venturesome enterprise, expanded credit facilities, and world shortages that were to combine to bring a general post-war boom, and then the collapse into this depression. Recent studies of the history of

² In *The Chief Cause of This and Other Depressions*, pp. 5-13. This section, including the charts, has been reproduced here with the kind permission of Colonel Ayres and The Cleveland Trust Company.

business cycles show us that all these developments conformed to the well defined sequences that appear to have governed economic movements during and following nearly all important modern wars.

The simple rule is that the war is accompanied by a period of exceptional business activity and prosperity. It is followed by a sharp and usually short period of hard times which we may designate as the primary post-war depression. This gives way to a rapid recovery and a period of active business expansion, which in turn is displaced by a long and severe period of sub-normal activity which we may term the secondary post-war depression. The great depression of the 30's is the secondary post-war depression following the World War.

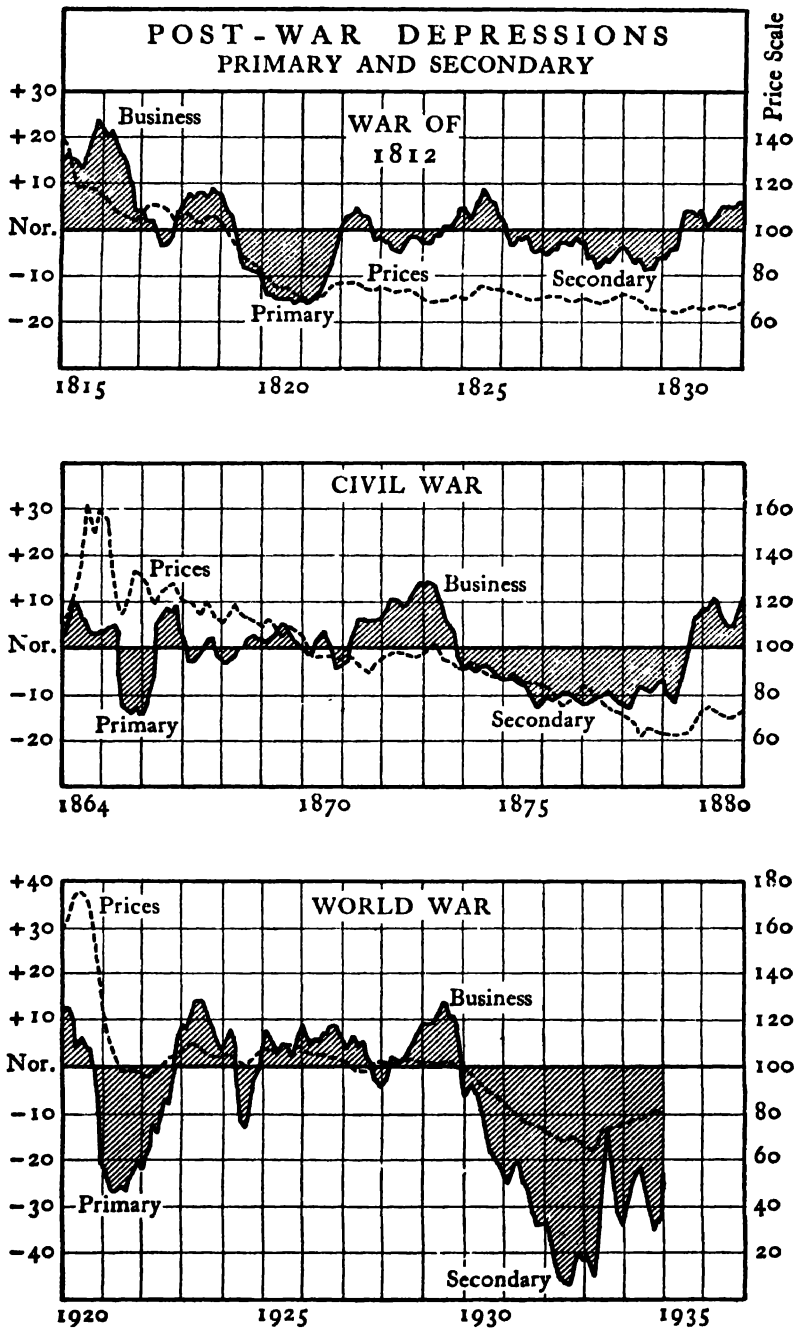
We may trace these sequences in the economic history of a good many nations, and over long periods of years, but they are particularly well defined in the business annals of our own country. A consideration of their causes will aid us to gain insight and understanding as to the nature of this depression. We may start with the historical fact that we had a primary and a secondary post-war depression following the War of 1812, again a primary and a secondary post-war depression following the Civil War, and now once more a primary and a secondary post-war depression following the World War. Moreover these pairs of post-war depressions have had certain characteristics in common that appear to indicate that they have formed parts of a specialized pattern that business activity follows after all great wars.

The diagram on page 678 shows the monthly changes in business activity, and in wholesale commodity prices, during three sets of post-war depressions. The diagram is based on data compiled by the author, and taken from a long diagram showing changes in business activity in the United States since 1790, and published by The Cleveland Trust Company, of Cleveland, Ohio. In each section of the diagram the black silhouette shows the percentages by which business activity rose above the computed normal level, or fell below it. Business activity in this instance really means industrial activity, and in the section relating to the years since 1900 it means the physical volume of industrial production. The line showing the fluctuations of commodity prices has been so computed that the average for 1929 is taken as being equal to 100. This choice is an arbitrary one, and does not indicate that the price levels of 1929 were normal ones.

It is not the event of war that shapes the patterns, but rather the fact that great wars cause sudden and extreme advances in commodity prices. It is this sudden price advance which largely determines the nature and sequence of the business cycles of the following 20 years or so. Since sudden and great advances in the general levels of commodity prices have seldom come in most modern nations except in time of war, the special patterns of business movements that we are considering may be thought of as restricted to war and post-war periods.

In broad general terms we may think of all the people in the world as being divided into two great classes. In the first class are the people who live in the country and earn their livelihoods by extracting valuable

CHART XVII



things from the earth through agriculture, mining, lumbering, and fishing. In the second class are those who live in towns and cities, and support themselves by taking the things produced by the country dwellers, and fabricating them, and trading in them.

When war comes, and commodity prices mount, the prompt result is a great wave of prosperity for the farmers. For some time their production costs increase but little, and so the advances in the prices they receive for their crops are almost all profit. Under such conditions the doubling of the amount received for a crop of given size may well result in a tenfold increase in the profit to the farmer. The next development is a great speculation in farm lands, the plowing of additional fields, the use of profits to buy more land, and a large increase in farm mortgages. Production is sharply stepped up, and every effort of government is used to encourage and stimulate the process, for war is an insatiable consumer. The other extractive industries of mining, forestry, and even fishing, are similarly stimulated.

This period proves rather difficult for the city dwellers, for while industry and trade are brisk, and everyone can find work, the cost of living rises rapidly, wages do not advance nearly as rapidly as prices, and industrial disputes multiply as pay increases are demanded. However, toward the end of the war, or shortly thereafter, commodity prices reach their peak and turn down. With the price deflation comes business depression for the rural and urban dwellers alike. After the Civil War this primary post-war depression came in 1865, as soon as hostilities ceased, but after the War of 1812 it did not come until 1819, and although the World War was terminated in 1918 the depression did not come until 1921. With the depression comes a collapse of the farm-land boom, and the farmers find themselves burdened with the heavy mortgages placed at the earlier high land prices. Even those without mortgages find themselves faced with the dreary task of reverting to standards of living lower than those to which they have just become accustomed.

When this primary post-war deflation, and primary post-war depression, have run their course there ensues a period of urban prosperity. Food is now relatively cheap in the cities, for production has increased so that supply is definitely greater than peace-time demand. Food constitutes a large part of the cost of living of the industrial workers, and when food prices decline more rapidly than urban wages the result is a period of hard times for the country dwellers, but of prosperity for city people. The world was moving through such a period from the depression of 1921 to the end of the prosperity in 1929.

Two characteristic developments mark a period of that sort. The first is a boom in city real estate, with great activity in building construction, stimulated not merely by the prevailing economic prosperity of the city dwellers, but also by the making up of the building shortages that accumulated during the previous war period of inflated prices. After the World War the real estate boom was further stimulated by the creation of far-flung suburban extensions made possible by the advent of the automobile. The second of the two characteristic developments is a

period of general speculation in almost everything except commodities.

A post-war period of prosperity of this sort can last a long time but eventually it destroys itself. The real estate boom and the construction boom run to excesses. General speculation creates fictitious values. There comes a time when the speculative boom collapses. Then comes the secondary decline in commodity prices, the drop in security quotations, and the rapid deflation of city real estate values. The result is the secondary post-war depression, afflicting urban and rural communities alike.

The distinguishing characteristic of this secondary depression is that business and government are burdened and well-nigh paralyzed by the weight of the debts incurred at the higher price levels of the prosperity periods, and entered into under the stimulus of the expansion psychology of the speculative period. During this secondary post-war period of hard times, wages, prices, and profits for both city dwellers and country people are painfully jarred and jolted back into a working adjustment in the effort to enable the people of the nation or the nations to make progress in the long task of paying down the accumulated indebtedness. These efforts are always accompanied by agitation in favor of lightening the load by monetary inflation, and by laws to extend indebtedness, or to repudiate it, or to refund it by the use of public credit.

Apparently it takes about 15 years for the events that have been described to run their course. It takes about 10 years for the developments that intervene between the peak of war-time prices and the beginning of the secondary post-war depression. The peak of commodity prices of the War of 1812 came in 1815, and the secondary depression was ushered in 10 years later by the panic of 1825. That depression lasted more than four years. In the Civil War the peak of prices came in 1864, and the first full year of the secondary post-war depression was 1874. The depression lasted six years. After the World War the peak of commodity prices was in 1920, and the first full year of the secondary depression was 1930. In each case there seems to have been the same sequence of (1) commodity price inflation, (2) farm prosperity and farm-land speculation, (3) price deflation and a short primary post-war depression, (4) a period of city prosperity and widespread speculation, (5) secondary price deflation and a long secondary post-war depression.

A WORLD DEPRESSION

BUSINESS developments have followed patterns of closely similar sequences in this country during and after those two earlier wars, and in this latest period, but this time the whole world is involved. Instead of thinking about it merely in terms of our own country districts and city populations, we must remember that this time these characteristic economic developments that accompany and follow a great war affect whole nations, and almost all nations, all over the world.

The changes in the volume of industrial production in 10 countries during the 10 years from 1925 through 1934 are shown in the diagram

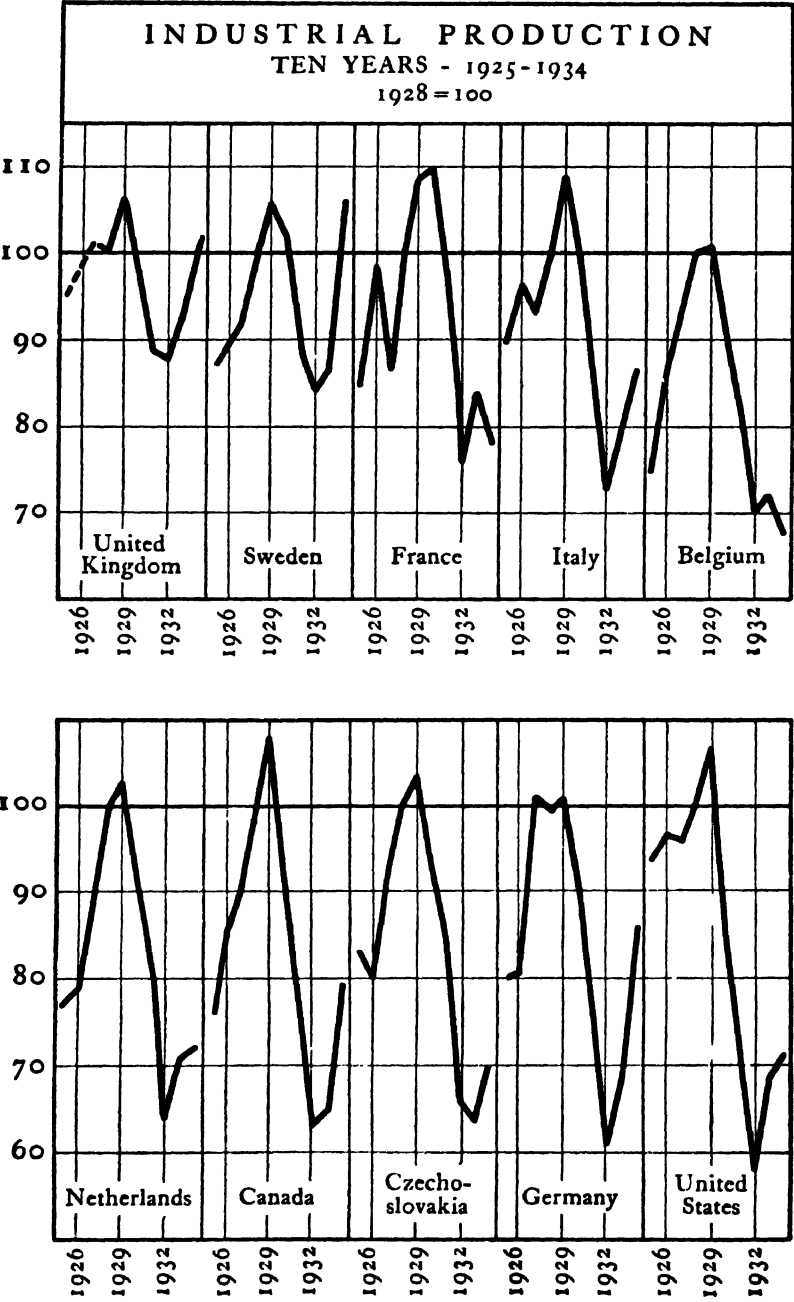
on page 682. The data from which it is drawn are those published by the statistical section of the League of Nations. In each case the volume of production in 1928 is taken as being equal to 100, and the volumes for the other years are in percentages of that base. The marked similarity in the contours of almost all the curves shows that the boom that reached its climax in 1929 was as truly international in character as was the depression that followed it. This greatest of all depressions is world-wide in extent. It followed an international business boom which was probably unprecedented both in its vigor and extent, and in the volume of speculation with which it was accompanied. Both sets of phenomena followed as results of the greatest of all wars.

The depression itself got actively under way with the collapse of the speculative booms in the autumn of 1929, but its advent also was in large degree international in character. Wholesale commodity prices had been falling in England and Canada since the beginning of 1925, and serious declines got under way in a long list of other countries in 1928 and early in 1929. The market prices of stocks turned down in Germany in the summer of 1928, in Great Britain and the Netherlands in the spring of 1929, and in Sweden in the summer of that year. Industrial activity began to decline in Canada and in Italy in the spring of 1929, and in Japan in the summer of the same year, while in France the down-turn did not take place until the spring of 1930. Almost all the countries of the world are involved in the depression, but no one among them can rightly be charged with having started it or with being responsible for having caused it.

The great and rapid price advances that accompany wars, and the long price declines that follow them, have been discussed in this section as being directly responsible for the nature and sequence of the business cycles of the 20 years or so following the wars. This appears to be the case, and the third section of this essay is devoted to a discussion of the maladjustments between the production of durable goods and consumers goods that appear to constitute the chief causes of business cycles in general, and to occur in specially aggravated form when the wide price swings of war and post-war periods are under way. The great price increases and decreases of war and post-war periods are directly responsible for the special types of prosperity and depression discussed in this section, but the changes in the volume of production of durable goods furnish the economic mechanism through which they work out their effects on employment and on general business activity.

The evidence presented by Colonel Ayres makes clear the nature of post-war business movements in the United States. It shows that the so-called "new era" was not new at all and that the secondary post-war depression was not entirely different from other depressions arising out of similar causes. The extent of both the prosperity plateau and the ensuing depression was not out of line with what

CHART XVIII



might have been expected from the severity of the War and its world character. Moreover, the evidence indicates that the year 1932 marked the low point of the depression in the majority of countries. This leads to the inference that the continuance of the depression into 1933 in the United States was a result of special causes.

MONETARY POLICY AND RECOVERY

The business cycle and the value of money.—The foregoing discussion has demonstrated that there is a good deal of instability within the entire system of prices which accompanies the changing course of business through the various phases of the business cycle. In the typical instance the prosperity phase of the cycle shows rising prices while prices fall in the recession period. It is the opinion of many students of money that, if these swings in prices could be ironed out by control of the volume of money and bank credit, business instability could be eliminated. Whether or not this conclusion is correct depends upon the extent to which the business cycle is a result of changes in the value of money.

In the period prior to the Great War, Snyder's index of the general price level was comparatively stable. Between 1887 and 1913, it fell from 75 to 71 in the years 1888–1896, and thereafter rose to 100 in 1913. These movements were gradual, long-term tendencies, however, showing little cyclical fluctuation.

The question of the extent to which business cycles would have been eliminated in this pre-war period had the general price level been absolutely stable throughout the years under consideration admits of no exact answer. Professor Mills, in a notable study,³ working with indexes of dispersion and displacement, measured the instability in the wholesale price system in relation to the instability of the wholesale price level. He found that, in the period 1893–1926, 40 per cent of the internal disturbance in the wholesale price structure might be attributed to changes in the price level, while 60 per cent of such internal instability would have occurred even if the wholesale price level had remained constant.⁴

³ *The Behavior of Prices.*

⁴ *Ibid.*, p. 369.

Since Mills' period of study included the drastic price changes of the war and post-war years, it is reasonable to conclude that the amount of internal instability attributable to changes in the wholesale price level in the years 1893-1913, before the war, would have been substantially less than 40 per cent. Moreover, if the general price level had been used instead of the wholesale price level, the percentage would have been still smaller, since, as we have seen, the general price level was decidedly more stable than the level of commodity prices at wholesale in the pre-war period.

Everything considered, then, it may be concluded that there was comparatively little relation between fluctuations in the value of money and business movements in the pre-war era. Cyclical movements in business represented maladjustments within the price system rather than changes in the general price level itself. During and after the Great War, however, this was not the case. Snyder's index rose from 100 in 1913 to 193 in 1920, then fell to 158 in 1922, after which it was fairly stable at around 170 until the beginning of the depression. During the depression it fell to 123 in March 1933, and rose to 142 in the two following years.

Under the circumstances, it is perhaps not unnatural that the Roosevelt Administration, having noted the extensive decline in prices since 1929, should feel that the depression was in some way due to the decline in the price level and that measures to raise prices were essential to recovery. We have seen what these measures were at an earlier point (Chapter IV). It is now necessary to examine them critically with a view to determining their soundness.

Monetary policy a part of the recovery program.—The monetary policy of the Administration must be considered as one of the major steps in the recovery program. It was designed, as the President pointed out in October 1933, to attain such a level of prices "as will enable agriculture and industry to give work to the unemployed." It was also designed "to make possible the payment of public and private debts more nearly at the price level at which they were incurred." Thus the restoration of business activity and the attainment of justice between debtors and creditors were

joint aims of monetary policy. Any critique of the steps taken by the government in the monetary field, therefore, must be based on the desirability and necessity of a higher level of commodity prices in the attainment of the desired ends.

The price level and business recovery. — The aim of the Administration was generally conceded to be the restoration of commodity prices to the 1926 level. That the restoration of commodity prices to pre-depression levels is *not* essential to business recovery may be demonstrated both by analysis and by historical evidence.

From the analytical standpoint it may be noted that the real force standing in the way of business revival was a maladjustment of prices within the price system, not the low level of prices which prevailed in, say, 1932. It is true that so long as commodity prices continued to fall, as they did from the middle of 1929 to the middle of 1932, business could scarcely be expected to recover. But, once prices stabilized, even at the low level of the latter year, business revival could be expected to take place within a moderately short time.

An analysis of the situation which prevailed in the United States prior to the inauguration of President Roosevelt shows that the long-continued decline in business activity and the commodity price level was largely due to loss of confidence in the banks. The large number of bank failures inculcated fear in the minds of depositors who withdrew their deposits in the form of hand-to-hand money and hoarded it. This action in itself caused the failure of some banks, while other institutions, striving to put themselves in an impregnable position, sold bonds and put pressure on their borrowers to repay their loans in order to acquire sufficient cash or reserve funds to meet any demands from frightened depositors. If borrowers could not repay their loans, many banks sold the stocks and bonds which were held as security for these loans and closed out the borrowing customers' accounts. Finally, many individuals, finding that stock and bond prices continued to recede, themselves sold their securities, preferring to hold cash which would not depreciate rapidly in value.

Thus receivers of closed banks, solvent banks attempting

to strengthen their cash position, and individuals were all liquidating securities in large amounts. Colonel Leonard Ayres, among others, has demonstrated beyond doubt the fact that business recovery is preceded by an increase in new stock and bond financing, the funds obtained from the sale of the new securities being used to employ labor and capital in the heavy goods industries, where stagnation and unemployment are most severe.⁵ It is clear, however, that as long as distrust in the banks continued, with its accompanying stream of security liquidation, the security markets would continue to weaken and no new financing would be possible.

The necessary action to strengthen the security markets and make possible the flotation of new security issues accordingly consisted of measures which would restore the public's confidence in the banking system. Such action was attempted with some success by the Reconstruction Finance Corporation in the early months of 1932, and prices and markets strengthened substantially in July and August. The unwillingness or inability of the R.F.C. to reassure the public completely, however, led to a renewal of failures which terminated with the Banking Crisis of 1933.

It was felt by some observers that when prices began to stabilize in the summer of 1932, the level of prices was too low to permit of business recovery. There does not seem to be any sound basis for such a conclusion. With prices as low as they were, some enterprises a little more than covered their costs in 1932, some broke even, and some suffered a small deficit. But the demand for their products was negligible, so that their volume of business was painfully small. Given a large volume of business, even at 1932 prices, and the firms that were in the black, or only slightly in the red, would have shown substantial profits. The reason for this is that costs had been reduced and operating efficiency increased by virtue of the depression. Consequently, with a substantial volume of business, it would have been possible for many concerns to earn satisfactory profits. But volume of business, in turn, depends upon demand and once confidence in the financial structure had been assured, the best

⁵ See L. P. Ayres, *The Economics of Recovery*. This excellent little volume exposes most of the fallacies of the Roosevelt monetary program.

way to stimulate demand would have been to keep prices low.

From the point of view of business recovery, then, the Administration's policy was neither essential nor desirable. After restoring confidence in the banks, the most efficacious policy would have been to return to the gold standard, in order to maintain confidence in the currency, and to interfere with prices, if at all, only by helping to correct maladjustments where possible in the existing price structure.

That the restoration of commodity prices is not an essential prerequisite to business revival may also be historically demonstrated. Colonel Ayres, in writing of the five great depressions in our history, including that of 1929-1933, states "that in all five of these depression periods the belief was widely held that the restoration of normal conditions would not be possible unless the general levels of commodity prices could be lifted back to something like their pre-depression figures. It is especially worthy of note that in the four earlier cases business revival did come, and prosperity returned, without the restoration of the earlier price levels."⁶

The price level and debts.— While it may be admitted by some that recovery might take place on a lower level of prices than that existing prior to the depression, it is frequently claimed that the restoration of the pre-depression commodity price level was necessary for the relief of debtors who had contracted their debts at higher prices than those existing near the close of the depression. The idea also has only a very limited validity.

The chief debtors of the country fall into three major groups. They are, first, the railroads, public utilities and some industrial enterprises ; second, governmental bodies, national, state and local ; and third, some home owners and some farmers. With regard to the first two groups, which include the vast majority of debtors in respect to volume of indebtedness, it should be perfectly clear that the most potent method of relief would be to increase the volume of business and, hence, the volume of profits. As Mr. Edmund Platt has concisely put it, "it is profits, not prices, which pay debts." Obviously, if costs had been reduced and productive efficiency

⁶ *Ibid.*, p. 157.

increased, which they had in the course of the depression, it would be possible to sell services or products at much less than pre-depression prices and still earn pre-depression profits if the volume of business could be substantially increased. Moreover, the railroads and public utilities, whose charges are controlled by commissions, and who are hence unable to adjust charges promptly to higher costs, would be injured rather than helped by a sharp rise in the level of prices.

As for the governmental units, it is a well-known fact that large tax receipts and ease in the collection of taxes depend primarily on profitable and active business. It follows that relief to debtor governments required not higher prices, which would tend to retard recovery, but a large increase in the volume of business activity, which could best be attained by maintaining, for the time being at least, attractively low prices.

With respect to debtor home-owners and farmers, the case is less clear. Even here, however, a revival of business activity would have afforded substantial relief. To illustrate, between June 1929 and June 1932 the index of wage rates of the Federal Reserve Bank of New York fell 20 per cent. The cost of living, by a comparable index of the same bank, fell 24 per cent in the period in question. Consider, in these circumstances, a Mr. X who was receiving wages of \$2,400 a year in 1929, and who was paying one-sixth of this income, or \$400 per year, to the holder of a mortgage on his home. Assume that his wage rate had declined the average amount—20 per cent. Mr. X's mortgage payments would still total \$400 per year. Provided that he could obtain full-time employment, his total wages would amount to 80 per cent of \$2,400 or \$1,920, from which this fixed charge must be subtracted, leaving him \$1,520 with which to meet his living expenses, as compared with \$2,000 before the depression. But the cost of living had declined 24 per cent in the meantime, so that Mr. X's living expenses, which amounted to \$2,000 in 1929, would total only 76 per cent of that figure, or \$1,520, which is the amount he has available for this use after paying his \$400 on the mortgage.

As for the farmer, his costs declined somewhat during

the depression, with the result that he could produce crops⁷ at a profit at lower prices than were essential in 1929. It is true that agricultural prices were out of line with the prices of industrial commodities, but this was a dislocation within the price system, which the A.A.A. was designed to remedy,⁷ and is no argument for a restoration of the general commodity price level of the pre-depression period.

Moreover, relief to farmers and home-owners had been provided for under the Emergency Farm Mortgage Act and the Home Owners' Loan Corporation Act, which permitted a reduction in interest burdens for these two classes of debtors. Needless to say, additional relief, through a restoration of earlier price levels, would have been redundant under the circumstances.

The budget and recovery.—In addition to the recovery measures which the government instituted, certain relief plans, requiring the expenditure of huge sums of money, were undertaken. It will be generally agreed that some relief legislation was essential, and, although the administration of relief funds has not been entirely economical or efficient, no criticism can justly be directed against the general policy of the government in this regard. However, since relief expenditures necessitated a substantial increase in the public debt, it was especially desirable to follow a monetary policy which should inspire the business men of the country with confidence.

There were two reasons why a conservative monetary policy was indicated under the circumstances. In the first place, the servicing and subsequent reduction of a vast amount of new indebtedness could scarcely be accomplished without a fairly widespread and rapid recovery in business activity, in the attainment of which a sound money policy would have been of material assistance. In the second place, the building up of a strong investment market for "governments," in order to assist in the absorption of the new issues of Federal securities, would have been greatly aided by the retention of a conservative monetary policy.

⁷ No analysis of the A.A.A. or the N.R.A. can be attempted here. Suffice it to point out that the attitude adopted by the N.R.A. in 1933, favorable to raising wages and shortening hours of labor, could only have the effect of increasing the discrepancy between agricultural and other prices.

• It was to be expected, of course, that the emergency expenditures themselves would increase business activity to some extent. Unless sound revival, based on the increased flow of capital into the investment market for industrial securities, took place shortly, however, the governmental expenditures would have only a temporary effect and would have to be increased and continued in order to prevent another relapse. But, if the increase in the public debt is carried too far, the government's credit is first weakened, then destroyed, and resort to inflation becomes the only method of meeting governmental expenditures.

As a recovery measure the monetary policy of the Roosevelt Administration had practically nothing to recommend it. It was predicated upon the naïve and unsound notions that a restoration of the pre-depression commodity price level was prerequisite to business recovery and essential to afford justice to debtors. Actually, in the interests both of debtors and of recovery the best course to have taken, after restoring confidence in the banks, would have been to return to the gold standard, balance the budget, and let natural forces of recovery, already at work, do the rest.

Monetary policy and defense.—Whereas the recovery policy traced above was designed to raise prices, the problem at present, now that the defense program is under way, is to prevent prices from rising too rapidly or too far. Little action in this direction had become necessary by the end of 1940, but with a continuance of the program action to prevent inflation may easily become highly desirable. The action which should be taken in this connection is discussed at some length in Chapter XXXV and need not be gone into at this point. It may merely be noted that the institution of measures to prevent inflation has a much sounder foundation than the price-raising policy instigated in 1933.

Conclusion.—In a sense, monetary policy and credit policy are much the same thing in a country such as the United States where credit performs the great bulk of monetary work. It is accordingly necessary to consider the matter of credit control at some length. In the following chapter we shall be concerned with the historical experience of the Federal Reserve authorities along this line, after which a

further chapter will be devoted to the theoretic possibilities of controlling credit.

REFERENCES

- Ayres, L. P. *The Economics of Recovery*. New York. 1933.
Ayres, L. P. *The Chief Cause of This and Other Depressions*. Cleveland. 1935.
Crum, W. L. *The Review of Economic Statistics, Supplement*, September, 1925.
Edie, L. D. *The Stabilization of Business*. New York. 1923.
Einzig, P. *Monetary Reform in Theory and Practice*. New York. 1937.
Gayer, A. D. *Monetary Policy and Economic Stabilization*. New York. (Second Revised Edition). 1937.
Mills, F. C. *The Behavior of Prices*. New York. 1927.
Mills, F. C. *Prices in Recession and Recovery: A Summary of Recent Changes*. New York. 1936.
Mitchell, W. C. *Business Cycles*. Berkeley. 1913.
Mitchell, W. C. *Business Cycles, The Problem and Its Setting*. New York. 1927.
Phillips, C. A., McManus, T. F. and Nelson, R. W. *Banking and The Business Cycle*. New York. 1937.
Snyder, C. *Business Cycles and Business Measurements*.
Warren, G. F. and Pearson, F. A. *Gold and Prices*.

CHAPTER XXXIV

THE CONTROL OF CREDIT UNDER THE FEDERAL RESERVE SYSTEM

Early experience.—Before the establishment of the Federal Reserve system, the banking system of the United States consisted of many thousands of individual banks, state and national, under no central control except the supervisory regulation which was exerted by the state superintendents of banks and the Comptroller of the Currency. In large measure, each banker was governed by his own judgment and the reserve requirements of the banking laws in determining the extent to which he should expand his loans and investments. Usually, in periods of active business, loans and discounts would be extended until the bankers became somewhat worried about their reserve position, when they would curtail their lending operations and thereby assist in bringing about the termination of the upswing of business. Under such circumstances there could be little or no organized control of credit.

When the Federal Reserve system was inaugurated, it was expected that its chief functions would be to extend emergency credit to member banks in time of stress and to furnish the country with an elastic system of note issue based on self-liquidating paper. Otherwise, no organized control of credit was contemplated. As a matter of fact, little attention was given to credit policy until after 1921, and our interest will lie chiefly in the period following that year. First, however, a brief consideration of Federal Reserve policy during the earlier period is in order.

Pre-war period.—During the period prior to the entry of the United States into the Great War, the Reserve system functioned substantially in the manner anticipated by the framers of the act. Its volume of operations was small and open market operations in government securities were of

negligible importance. In fact, in December 1916, the chief earning asset of the Reserve banks consisted of \$128,956,000 of bills bought in the open market, bills discounted amounting to but \$28,552,000 and holdings of long-term government securities to \$44,247,000. Federal Reserve notes in circulation amounted to \$274,796,000 on the same date.

It is probably correct to say that the development of the Federal Reserve system during this early period was as rapid and satisfactory as could have been expected. Much of the time of the authorities in charge of the administration of the system had to be devoted to problems of organization, and no real evolution of broad policies could have been anticipated. Moreover, almost no state banks had joined the system, and many of the national bank members were skeptical of the advantages to be derived from their membership.

The war period.—The entry of the United States into the War in April 1917 changed the whole aspect of reserve banking development. From that time on it was necessary for the system to devote its attention to the vital task of organizing the credit facilities of the country for war financing. The amendments of June 21, 1917, by providing for the issuance of Federal Reserve notes directly against gold security, for a reduction in member bank reserve requirements and concentration of reserves in the Federal Reserve banks, and for more attractive conditions of state bank membership in the system, greatly aided the Reserve banks in attaining the desired end.

Under the provisions of the law, as thus amended, the Federal Reserve banks exchanged Federal Reserve notes for gold, which process, together with the application of the new reserve requirements, brought several hundred million dollars of gold into the vaults of the Reserve banks and thereby increased the lending power of the system. The system was also strengthened by an increase in state bank members from 53, at the time of the passage of the amendments, to 250 at the end of 1917.

The extent of the Reserve banks' operations during the War period is best shown by the data in Table XL, taken from the combined condition reports of the twelve

TABLE XL
SELECTED ITEMS FROM THE COMBINED STATEMENTS OF THE FEDERAL
RESERVE BANKS
(In thousands of dollars)

	Mar. 30, 1917	June 22, 1917	Dec. 28, 1917	May 10, 1918	Nov. 8, 1918	Dec. 27, 1918
Total gold reserve..	938,046	1,212,018	1,671,133	1,883,135	2,046,591	2,090,274
Held by Federal reserve agents..	360,668	390,765	781,851	885,027	1,145,640	1,288,309
Bills discounted:						
Secured by war obligations ....	.. . . .	83,185	283,421	612,324	1,316,967	1,400,371
All other	20,106	157,799	397,285	326,717	480,271	302,567
Bills bought	84,473	194,303	275,366	286,036	374,522	303,673
United States securi- ties	47,700	114,918	107,233	146,878	121,435	311,546
Net deposits	706,905	1,242,210	1,457,994	1,651,324	1,661,521	1,552,892
Federal reserve notes in actual circula- tion	357,610	499,721	1,246,488	1,569,618	2,558,196	2,685,244

Source : *Annual Report of the Federal Reserve Board*, 1918. Pp. 15-16.

Federal Reserve banks. As the War progressed, more and more of the Reserve banks' credit was based on United States securities, with the result that, by the end of 1918, these banks held discounts secured by United States war obligations amounting to \$1,400,371,000 and purchased government securities of \$311,546,000. The gold reserve was more than doubled during the period in question and the amount of Federal Reserve notes in circulation increased by over seven times.

The discount policy of the Federal Reserve system during the War was dictated by the policy of financing adopted by the Treasury. In the course of the War, the Treasury floated large issues of Liberty Bonds—which, including the Victory Loan in the spring of 1919, aggregated more than \$21,000,000,000—at interest rates which were distinctly below the market. The sale of this vast mass of securities at par would have been quite impossible without the assistance of the banking system.

The banks came to the aid of the government in two ways. First, they themselves purchased large amounts of bonds as investments; and, second, they made loans on the security of Liberty Bonds, to those wishing to buy them on

time, at a rate equal to the coupon rate on the bonds. Neither of these transactions required any immediate outlay of reserve funds by the banks. When the banks purchased Liberty Bonds for their own account, they merely credited the deposit account of the Treasury with the amount of the purchase. When they made loans to customers on Liberty Bond security for the purchase of bonds, they likewise credited the account of the Treasury by the purchase price of the bonds. Since United States deposits required no reserve held against them, these were both mere bookkeeping transactions which increased the banks' loans or investments, but did not require a reduction in their other loans or deposits.

The Treasury, however, made use of these deposit credits by drawing checks against them for the purpose of paying bills incurred in the purchase of munitions, food, and other military supplies. As these checks were deposited by the creditors of the government in their banks, they were paid by debiting the Treasury's account and crediting the account of the depositors. From this point on, they became individual deposits which were subject to reserve requirements. Consequently, it soon became necessary for the banks to borrow at the Reserve banks in order to keep their reserves up to the required figure. Moreover, commodity prices and wages had risen sharply and the increased need for hand-to-hand money which accompanied this rise in the price level also made it necessary for member banks to borrow at the Reserve banks.

In order to permit the individual banks of the system to borrow at the Federal Reserve banks without loss, the latter institutions maintained discount rates at an artificially low level and instituted a preferential rate on war paper (i.e., discounted paper secured by Liberty Bonds) which was as low as—at times slightly lower than—the rate borne by the bonds. The Reserve banks also accepted for discount non-member bank war paper when endorsed by a member bank.

It was thus possible for the expansion of credit to go on in the fashion described as long as the Reserve banks had sufficient gold to maintain their required reserves against notes and deposits. Actually, the gold reserves of the Re-

serve banks increased sharply during the period, as shown in the table. This increase in reserves was made possible by the exchange of Federal Reserve notes for gold, a procedure which was greatly facilitated by the large gold imports, amounting to about \$1,000,000,000, that occurred in 1915-1916, and to the embargo on gold exports which was in force from the fall of 1917 until the summer of 1919. Without this increase in gold reserves it would have been impossible for the expansion of credit to have gone nearly so far as it actually did.

The post-war inflation.—Although the armistice was signed in November 1918, much financing was still necessary. The Victory Loan was floated in May 1919, at a rate of $4\frac{3}{4}$ per cent, and it was essential to the success of this issue that the Reserve banks should retain their artificially low discount rates until the financing of the issue was completed. Meanwhile, after a brief readjustment necessitated by the cessation of demand for war materials and the return of service men to civil life, business entered a period of boom conditions. The relaxation of restrictions which had been imposed on individual consumption during the War was the signal for the beginning of an orgy of expenditure which did not end until the collapse of the boom in the spring of 1920.

That the business boom was stimulated by the retention of low discount rates at the Reserve banks can scarcely be doubted. In view of the Treasury's policy, however, it was not deemed expedient to raise rates until November 1919, and no substantial increases were made until the beginning of 1920. Soon after the increases of 1920 had been put into effect, the crisis occurred in business, and in some quarters there was a disposition to lay the blame for it at the doors of the Federal Reserve system. The absurdity of such an attitude was apparent, however, to serious students of economics, who were inclined rather to blame the reserve banks for having waited so long before raising their rates. The crisis was inevitable, but quicker action by the Reserve banks, had the Treasury's policy permitted it, would very likely have mitigated the severity of the crash by preventing the preceding overexpansion from having gone so far.

The Federal Reserve system met the crisis of 1920 in approved fashion. Discounts and note-issues were expanded to meet the needs of member banks who wished to carry their fundamentally sound customers over the period of readjustment. Consequently, "total bills bought and discounted" and "Federal Reserve notes in actual circulation" did not reach their respective peaks until November and December, 1920. The extent of the post-war expansion and subsequent decline is shown in Table XLI.

TABLE XLI

SELECTED ITEMS FROM THE COMBINED STATEMENTS OF THE FEDERAL
RESERVE BANKS

(In thousands of dollars)

	<i>June 27,</i> 1919	<i>Dec. 26,</i> 1919	<i>June 25,</i> 1920	<i>Dec. 30,</i> 1920	<i>Dec. 28,</i> 1921	<i>June 30,</i> 1922
Bills discounted:						
Secured by war obligations.....	1,573,483	1,510,364	1,277,980	1,141,036	487,193	167,241
All other.....	244,557	684,514	1,153,814	1,578,098	692,640	294,177
Bills bought.....	304,558	585,212	399,185	255,702	114,240	161,112
United States securities.....	231,569	300,405	352,296	288,191	241,444	555,465
Federal reserve notes in circulation	2,499,180	3,057,646	3,116,718	3,344,686	2,443,497	2,152,962
Reserve ratio (per cent).....	52.1	44.8	43.6	45.4	71.1	77.9

Source: Annual Reports of the Federal Reserve Board.

In 1921 a Congressional committee known as the Joint Commission of Agricultural Inquiry conducted a searching investigation of the Federal Reserve system, which was thought by some to have been responsible for the depression in agriculture and to have discriminated against agriculture as well. The Commission returned a clean bill of health for the system and demonstrated in its report that, if there had been discrimination, it had been in favor of agriculture rather than against it.

CREDIT POLICY AFTER 1921

Banking policy and credit policy.—In the operation of the Federal Reserve system two types of policy have been developed which may be termed "banking policy" and "credit policy" respectively. Banking policy may be held to include

those relations which have developed between the Reserve banks and borrowing member banks together with the rules and regulations which have been evolved with respect to the eligibility of paper, the clearing and collection of checks, and other arrangements having to do with individual or technical banking operations. Credit policy, on the other hand, is concerned with operations of the Reserve banks which affect the general credit situation, such as open market operations, changes in discount rates, etc. The developments coming under the head of banking policy have already been considered in detail, as well as the technique of open market operations and discount rate changes. The emphasis in the present chapter is not on these phases of banking or credit policy, but on the effects of the latter and the aims and purposes of the credit policy which has been followed in the period since 1921.

Credit policy.—In the nature of the case, many of the activities of the Reserve system which have been grouped under the head of banking policy were engaged in from the beginning. With respect to a general credit policy, however, the situation has been different. It has already been shown that, during the War and post-war periods, Federal Reserve policy was determined by the needs of the Treasury and consisted in providing for the maximum expansion of credit at low rates. It was really not until the resumption of business activity in 1922, therefore, that any real effort was devoted to the formulation of a sound credit policy.

The most important step toward the development of a credit policy was the organization of an open market investment committee, in 1922, to unify the purchases and sales of the twelve Reserve banks in the open market. The discovery had been made that purchases in the open market brought about a reduction of member bank indebtedness at the Reserve banks and vice versa, and that interest and discount rates in the short-term markets tended to vary directly with the amount of member bank indebtedness. Open market operations accordingly assumed a position of importance, along with changes in discount rates, as a method of controlling the general credit situation.

Gold position of the United States.—In the years prior to the Great War, the credit policy of central banks, as typified by the Bank of England, was generally conditioned on the state of the central bank's gold reserve. When that reserve was large, steps were taken to ease the credit situation, and, when it declined to unduly small proportions, a reversal of policy was put into effect. This simple criterion of credit policy was, however, not satisfactory to the reserve authorities when they turned their attention to the problem in 1922 for the reason that the gold reserves of the system were excessive. Although the reserves of the Federal Reserve banks combined had closely approximated the legal minimum at the height of the expansion in 1920, the subsequent deflation had greatly reduced the Reserve banks' note liabilities. Moreover, while deposit liabilities had increased slightly, the increase was largely the result of gold deposits by member banks which had received large gold imports from abroad.

During the years 1915–1918, the United States had received net imports of gold of \$1,152,269,000. The year 1919, which saw the removal of the gold embargo imposed during the War, was marked by a net gold export of \$291,651,000. In the period 1920–1922, however, the gold inflow was again resumed, net imports for these years amounting to \$1,000,629,000. Meanwhile, the gold reserves of the Federal Reserve banks had increased, by January 1923, to \$3,075,810,000, and the reserve ratio stood at 76.9 per cent for the combined Reserve banks. Obviously, unless the Reserve authorities wanted to encourage an inflation of larger proportions than that following the War, the use of the reserve ratio as an immediate indicator of credit policy was definitely out of the question.

Announced policy of 1923.—The conclusions of the Board of Governors with respect to the determination of a criterion of credit policy were published in the annual report of that body for the year 1923 under the caption of "Guides to Credit Policy."¹ The major conclusions of the Board in this connection may be summarized briefly as follows :

1. The inadequacy of the reserve ratio as a guide to credit

¹ Pn. 29-39.

policy was clear in view of the huge excess reserves of the Federal Reserve banks and the fact that gold movements were due to abnormal factors.

2. The maintenance of a stable price level as the sole objective of credit policy was rejected. The Board recognized the interrelation of credit and prices, but maintained that they were not related to each other as cause and effect. Moreover, it was pointed out that the price index records an accomplished fact. The use of a price index as a sole guide to credit policy would, therefore, be unsatisfactory as the unsound credit expansion which might bring about a rise in prices would already have taken place before being indicated in the price index. Finally, it was noted that certain changes in prices come from other than credit sources and should not be controlled by credit policy.

3. The personal—and therefore not statistically measurable—side of credit was stressed. The Board pointed out the importance of this phase of credit extension in connection with any program of credit control.

4. Both qualitative and quantitative tests were asserted to be of importance—the kind of credit extended and the total amount. With respect to the kind of credit, the Federal Reserve Act itself suggested the guides or indicators in testing the need for and adequacy of Federal Reserve credit. The needs for credit which the Act recognized as appropriate were those arising out of agriculture, industry and trade. As to the total quantity of credit, the Board believed that there would be little danger of excessive credit expansion by the Federal Reserve banks if the credit created was restricted to productive uses.

5. In amplifying its interpretation of productive uses of credit, the Board pointed out that as long as there was an uninterrupted flow of goods from the producer through the channels of distribution to the consumer, i.e., as long as production and consumption were in equilibrium, credit is being productively used. Extension of credit for withholding goods from the market for building up excessive inventories is not a productive use of credit. Neither is credit extended for speculative purposes productively used. As long as credit is extended for short-term operations in agriculture, industry

and trade, when these operations are genuinely productive and non-speculative, the volume of credit will not be excessive.

6. The need for adequate statistical data to assist in carrying out a credit policy of the sort outlined was obvious. The Board recognized this fact and stated that its own statistical division and those of the Federal Reserve banks were constantly employed in collecting business data and putting it into the form of index numbers for the Board's use.

It would be difficult to find anywhere a more penetrating analysis than that contained in the paragraphs here summarized from the Board's 1923 report. Unfortunately, these excellent guiding principles were not followed for long.

Alteration of policy.—The Board has not referred specifically in any of its reports to a departure from the principles announced at the close of 1923. Nevertheless, it is rather generally agreed that the Board's policy in 1924, and more decidedly in 1927, was influenced by international considerations. In both of those years a policy of "easy money" was pursued. In 1924 the Reserve banks' holding of United States securities were increased from \$118,000,000 (average of daily figures) in January to \$554,000,000 in December, while discount rates were reduced from $4\frac{1}{2}$ per cent to 3 per cent at the New York bank and to $3\frac{1}{2}$ or 4 per cent at the other Reserve banks in the course of the year. The total of Reserve bank credit outstanding was increased from \$1,040,000,000 in January to \$1,288,000,000 in December, although it was below either of these figures during the spring and summer months. As business activity had fallen off somewhat since 1923, the increase in Reserve bank credit resulted in a distinctly easy money situation. It is probable that this policy was designed, in part at least, to assist European countries, especially England, to return to the gold standard by discouraging further imports of gold into the United States.

The years 1925 and 1926 presented no unusual problems of credit policy. Business shortly recovered from the 1924 slump and the Reserve banks pursued a fairly uniform policy throughout the two years. Discount rates were maintained at $3\frac{1}{2}$ or 4 per cent at the various Reserve banks throughout

and holdings of government securities, which had been decreased early in 1925, were maintained at approximately a \$350,000,000 level during both 1925 and 1926. This state of affairs continued into the early months of 1927, but later in that year a second period of artificially easy money was inaugurated by the Federal Reserve system.

The 1927 policy was even less justified from the point of view of domestic conditions than that of 1924, and it was admitted to have had as its purpose the encouragement of gold exports to assist foreign countries which were losing gold to us. In the course of the last seven months of the year, Reserve bank holdings of United States securities were increased from \$291,000,000 to \$606,000,000, and discount rates were lowered in August from 4 to 3½ per cent at all the Reserve banks. Total Reserve bank credit outstanding increased from \$1,041,000,000 in May to \$1,568,000,000 in December. As business had experienced a slight recession in activity, thereby needing less Reserve bank credit, a period of extremely easy money naturally resulted from the policy pursued.

While the 1924 policy had been followed by a net export of gold amounting to \$134,367,000 in 1925, the year 1926 again witnessed an excess of gold imports of \$97,796,000. Moreover, additional net imports of \$131,501,000 occurred in the first six months of 1927. The easy money policy was therefore chiefly designed to reverse this trend. Its success in this particular direction is attested by the fact that there was a net export of gold from the United States, from September 1927 to July 1928, amounting to \$577,109,000.

Efforts to restrict speculative use of credit.—The apparently successful results of the 1927 policy were short-lived. The easy money conditions of that year encouraged and intensified the speculative movement in the stock market, a movement which had already made fair headway. As a result, the two years ending in October 1929 were witness to an orgy of stock speculation of the first magnitude. From November 1927 to the close of 1928 the average renewal rate on call loans to brokers had risen from 3.6 to 8.6 per cent, and other open market rates had stiffened materially. Meanwhile the discount rates of the Reserve banks

were raised from $3\frac{1}{2}$ per cent at all banks to 5 per cent at eight of the Reserve banks (including New York) and $4\frac{1}{2}$ per cent at the other four. The Reserve banks also reduced their holdings of United States securities to \$263,000,000 in December 1928.

The speculative fever had progressed too far, however, and the discount rate increases and sales of securities were of no avail in abating the expansion of credit. Accordingly, early in 1929, a different set of tactics was adopted. On February 7, the Board issued a notice to the public, including part of an earlier letter to the Federal Reserve banks, in which it was pointed out that, while the Board had neither the right nor the desire to set itself up as an arbiter of security values, it was much concerned by the absorption of credit by the stock market to the detriment of both commerce and business and of the proper functioning of the Federal Reserve system, the credit facilities of which, in the Board's opinion, were being used indirectly in the furtherance of stock speculation in contravention of the intent of the law.

A policy of direct pressure on member banks was there-upon inaugurated which effected some restriction in the call loans of those banks, but did not have any appreciable results in the way of curtailing the expansion of total call loans for the reason that the high rates in the market invited the extension of loans for the account of others than member banks. The extent of the increase in loans of this category is shown in Table XIX on page 444.

On August 9, 1929, the Federal Reserve Bank of New York finally was permitted by the Board to raise its discount rate from 5 to 6 per cent, and at the same time the reserve bank buying rate on acceptances was reduced from $5\frac{1}{4}$ to $5\frac{1}{8}$ per cent. This was done in an effort to permit the financing of commercial transactions on a reasonable basis while making credit for speculative purposes more costly. The futility of this endeavor was a foregone conclusion. The system's holdings of acceptances jumped from an average of \$75,000,000 in August to \$337,000,000 in October, the month of the stock market crash. This had the same effect in easing the money market as an equivalent purchase

of United States securities would have done, and thereby more than offset the restrictive effect of the 6 per cent discount rate.

Looking back upon the 1927 policy of easy money, it seems fairly clear that it was responsible, in part at least, for the difficulties of the two succeeding years. The stock market boom was responsible for far greater difficulties on the part of foreign central banks than those that were alleviated by the 1927 policy. On the whole, it would seem that a stricter attention to domestic credit needs in 1927 on the part of the Federal Reserve authorities would, in the end, have exerted a sounder influence on international banking affairs than the policy which was, in fact, followed.

The stock market panic and business depression.—The exemplary action of the Federal Reserve banks, particularly the New York bank which was most concerned, at the time of the break in the stock market has been noted in an earlier connection (p. 443). The New York bank, by discounting paper freely for members and purchasing a large amount of United States securities, averted a money panic and permitted the calling of loans to brokers in large quantities.

Business activity, which had begun to decline in the summer of 1929, continued its downward course—with a brief interruption in the spring—throughout 1930 and into 1931. Accordingly, as soon as conditions in the stock market would permit, a policy of easy money was inaugurated. By the end of 1929, the discount rate at the Federal Reserve Bank of New York had been lowered, in two steps, from 6 to $4\frac{1}{2}$ per cent. Five reductions in the course of 1930 brought it to 2 per cent at the close of that year, and a further reduction to $1\frac{1}{2}$ per cent occurred on May 8, 1931. On the latter date, the discount rates at the other Reserve banks ranged from 2 to 3 per cent as compared with a range of $4\frac{1}{2}$ to 5 per cent before the stock market break. In October 1929, average holdings of United States securities were \$154,000,000, for the twelve Reserve banks. These holdings were steadily increased to approximately \$600,000,000 in August 1930, and were further augmented during the year following.²

² To over \$700,000,000.

In the circumstances, money rates in the open markets receded to record low levels and customers' rates at the banks themselves also declined. The open market rates in New York City near the end of July 1931, are shown in Table XLII and indicate the extent of the decline. Money rates remained low until September 1931, when England departed from the gold standard. This led to a run on the dollar, previously referred to, in which the United States lost about \$700,000,000 in gold in a period of six weeks. In order to meet the demands for gold and a simultaneous withdrawal of deposits by customers, it was necessary for member banks of the Federal Reserve system to increase their average discounts at the Reserve banks by about \$500,000,000 between August and December, while bills bought by the

TABLE XLII
OPEN MARKET RATES, NEW YORK CITY

<i>Week ended —</i>	<i>Call loans (renewal)</i>	<i>Time loans (60-90 days)</i>	<i>Commercial Paper (4-6 mo.)</i>	<i>Acceptances (90-day)</i>
July 25, 1931.....	1.50	1.38	2.00	0.88
August 1, 1931.....	1.50	1.38	2.00	0.88
August 8, 1931.....	1.50	1.38	1.75	0.88

Source : *The Annalist*. Weekly average of daily figures.

Reserve banks in the open market rose from an average daily holding of \$135,000,000 in August to \$692,000,000 in October.

Under the circumstances, money rates were bound to tighten. For the week ended October 24th, the average rate on call loans had risen to 2.50 per cent, on time loans to 3.71 per cent, on commercial paper to 4.25 per cent, and on acceptances to 3.25 per cent. The Federal Reserve Bank of New York raised its discount rate to 2½ per cent on October 9th, and to 3½ per cent on October 16th, the rate remaining at the latter figure throughout the rest of the year. Thus the easy money policy of the Board, which had been ineffective in reviving business up to September, was suddenly terminated in the latter month as a result of international financial difficulties.

Criticism of policy. — Perhaps the chief criticism of Federal Reserve credit policy in the period 1922–1931 is that it was too opportunistic. Some degree of opportunism must enter into central banking policy in the very nature of the case, but there should be underlying principles which determine the main features of credit policy. Such underlying principles were formulated by the Board in 1923, but have not been followed since with any degree of consistency. The easy money policy of 1927, opposed to the requirements of domestic business, brought havoc in its wake and made it necessary to pursue a policy in 1929 which was in opposition to the interests of foreign countries. After 1929, the policy of easy money was carried to an extreme without satisfactory results. The Board would have done well to revert to the sound maxims of its announced policy of 1923 as an underlying basis for its future credit policy.

The Glass-Steagall Act and the easy money policy of 1932. — Banking conditions had become so distressing by the beginning of 1932 that emergency relief legislation was essential. The creation of the Reconstruction Finance Corporation by the Act of January 22, 1932, has been discussed in another connection. This legislation was followed by the passage of the Glass-Steagall Act on February 27, 1932, which has also been previously considered. It will be recalled that, in order to permit the issuance of Federal Reserve notes, while still not making it necessary for member banks to increase their discounts at the Reserve banks, Section 3 of the Glass-Steagall Act authorized the Federal Reserve Board to permit Federal Reserve agents to accept obligations of the United States, as well as eligible paper, as security for Federal Reserve notes, if it were deemed in the public interest to do this.

It is sometimes stated that the Glass-Steagall Act was passed because the member banks had insufficient eligible paper to obtain the Federal Reserve notes necessary to meet the demands of customers who were withdrawing their deposits. This was not strictly true, since member banks could borrow on their own notes secured by United States obligations, and the majority of member banks had govern-

ment bonds in their possession. Actually, the purpose of the law was to add to the supply of free gold of the Federal Reserve banks by permitting them to substitute government securities for gold held by Federal Reserve agents in excess of the required 40 per cent, and to permit the expansion of Federal Reserve credit on the basis of this free gold through open market purchases of government securities, thus making it unnecessary for member banks to increase their discounts heavily in a period of severe depression.

Following the passage of the Glass-Steagall Act, the Federal Reserve banks resumed their easy money policy of 1931 with greatly increased vigor. Reserve bank holdings of United States securities increased from a daily average of \$743,000,000 in February to \$1,850,000,000 in August, thereafter remaining relatively constant during the rest of the year. As a result of this bond buying program, bills discounted for member banks fell from \$848,000,000 in February to \$282,000,000 in December, and member bank reserve balances rose from \$1,907,000,000 to \$2,435,000,000 in the same period. Meanwhile the Federal Reserve Bank of New York reduced its discount rate from $3\frac{1}{2}$ per cent to 3 per cent on February 26th, and from 3 per cent to $2\frac{1}{2}$ per cent on June 24th, and open market rates fell to previously unheard of low levels, the commercial paper rate, at $1\frac{1}{4}$ – $1\frac{3}{4}$ per cent in December, being the only rate in the short-term open markets above 1 per cent. Member banks ended the year with excess reserves of about \$575,000,000. In the course of the year, the amount of government securities used as collateral for Federal Reserve notes under Section 3 of the Glass-Steagall Act reached a high point of \$634,500,000 at the end of June, this amount being reduced to \$427,800,000 at the close of the year.

The success of the easy money policy of 1932, as measured in terms of business recovery, was nil. Yet it is less open to criticism than the heavy bond purchases of previous years. It undoubtedly helped to stem the tide of deflation and placed the stronger member banks in a position to expand credit rapidly once the demand for accommodation on a sound basis set in. It could not, however, cure the essen-

tially unsound banking situations in various parts of the country, the elimination of which were essential to a recovery in business.

Federal Reserve policy in 1933.—On January 5, 1933, the Board issued a statement concerning the decisions of the Open Market Policy Conference, which concluded its meeting on that day. The important paragraphs of that statement were as follows:³

"The first and immediate objective of the open-market policy was to contribute factors of safety and stability in meeting the forces of deflation. The larger objectives of the system's open-market policy, to assist and accelerate the forces of economic recovery, are now assuming importance.

"With this purpose in mind, the conference has decided that there should be no change in the system's policy intended to maintain a substantial amount of excess member bank reserves, the continuance of which is deemed desirable in present conditions. Adjustments in the system's holdings in the open-market account will be in accordance with this policy."

A policy in line with this announcement was followed until the banking difficulties of February and March, 1933, made its continuance temporarily impossible. Following the banking crisis, the Administration decided upon a policy of reflation, the necessary powers to this end being granted in the Thomas Inflation Amendment of May 12, 1933, which provided, among other things, that the Secretary of the Treasury might enter into agreements with the Federal Reserve banks and the Board under which the Reserve banks would purchase up to \$3,000,000,000 of government obligations in the open market. It also provided that the Reserve banks would be relieved from any penalty on deficient reserves resulting from such purchases. After the passage of the Inflation Amendment the Reserve banks renewed their purchases of government securities in substantial amounts until their holdings reached a total of just over \$2,400,000,000. These purchases, however, were not made under any specific agreements with the Treasury.

Credit policy since 1933.—The Inflation Act of May 12, 1933 gave the Administration the power, among others, to

³ *Federal Reserve Bulletin*, January 1933, pp. 1-2.

issue \$3,000,000,000 in greenbacks. The Gold Reserve Act of 1934 made redemption of gold certificates by the Federal Reserve banks for the purpose of obtaining gold with which to settle international balances dependent on the consent of the Secretary of the Treasury, as noted above (Chapter IV). It also weakened the Reserve banks' ability to control the market since the Secretary of the Treasury was authorized to use any part of the \$2,000,000,000 stabilization fund, not needed for exchange operations, to purchase United States government obligations in the open market. Finally, the Treasury was accumulating a very considerable amount in seigniorage on silver purchased under the Silver Purchase Act. Consequently the Treasury had several billions of dollars which could be put into the market, if desired, to offset the effect of sales of government bonds by the Reserve banks. The Banking Act of 1935 increased and centralized the credit control powers of the Federal Reserve authorities, but, because of the powers mentioned, final control remained with the Treasury.

The actual policy of the Reserve authorities in 1934, 1935, and the first half of 1936 was largely negative. Holdings of government securities were maintained at \$2,400,000,000, no additional purchases of moment being undertaken. Discount rates at the Reserve banks and open market rates sank to new low levels, and an extremely easy money condition prevailed throughout the country.

By the summer of 1936, the Board of Governors of the Federal Reserve system quite properly began to get alarmed at the possibility of bank credit inflation. When the dollar was devalued in 1934, it was sharply undervalued in relation to leading foreign currencies, with the result that gold began to flow into the United States in large amount as noted earlier (Chapter XXIX). The dollar remained undervalued for several years and this situation, combined with a flight of capital to the United States arising out of disturbed European conditions, led to a continuation of the gold inflow. As gold came into the country, it was sold to the Treasury, which paid for it with drafts drawn against its accounts with the Federal Reserve banks, thus building up the deposits of the importing member banks. The Treasury would then

replenish its deposits with the Reserve banks by depositing gold certificates issued against the newly purchased gold. In this manner the reserves of the Federal Reserve banks were also increased.

By the middle of 1936, as a result of these continued gold imports, member bank reserves had mounted to a point where they were close to \$3,000,000,000 in excess of legal requirements. With the reserve requirements then in existence, these excess reserves would have permitted an expansion of currency and deposits in the banking system of \$60,000,000,000, according to the reserve authorities, in addition to the \$55,000,000,000 of currency and deposits then outstanding.⁴

Consequently, on July 14, 1936, the Board of Governors announced an increase of 50 per cent in member bank reserve requirements, effective August 15, 1936. When this increase was put into effect, excess reserves of member banks were reduced to about \$1,700,000,000. The gold inflow continued, however, and, in December 1936, excess reserves again exceeded \$2,000,000,000. As 1936 drew to a close, it was generally believed that the Board of Governors would take further action to limit excess reserves early in the new year, although it was a matter for speculation as to whether such action would consist of a further increase in reserve requirements or a gradual liquidation of the Reserve banks' huge portfolio of government securities.

It has been indicated that the action of the Board of Governors in raising reserve requirements in August 1936, had been in part negated by the close of the year because of the continuation of heavy imports of gold. In December, the Treasury took a step to assist the Reserve authorities in their efforts at control by announcing that gold imports would henceforth be sterilized. The procedure was to be as follows: The Treasury would buy the imported gold, as before, with drafts drawn against its balances in the Reserve banks, but instead of replenishing its balances by the deposit of gold certificates, it would sell Treasury bills to the banks for this purpose. The banks, in buying the Treasury bills, would use their excess reserves and the importation of gold

⁴ *Federal Reserve Bulletin*, February 1937, p. 99.

could consequently no longer augment the excess reserves of the member banks.

On January 31, 1937, the Board of Governors again raised reserve requirements by $33\frac{1}{3}$ per cent (to the full amount permitted by law), one-half of the increase to go into effect on March 1st and the remainder on May 1, 1937. The result of these two increases was to reduce excess reserves to about \$900,000,000. However, in March and April, presumably as a result of the final May 1st increase in reserves, member banks liquidated their government securities rather heavily, and the government bond market broke quite badly. As a result, the Federal Open Market Committee decided to support the market and bought some \$96,000,000 of government securities, thus pumping that amount of funds into the market in the face of the May 1st increase in reserve requirements. The market for "governments" having stiffened appreciably, the Reserve banks ceased their purchases at the end of April 1937.

Meanwhile, the Treasury had continued to sterilize gold imports, holding the gold purchased in an inactive fund. In September 1937, \$300,000,000 of this gold was released further to ease the money market, and, in February 1938, Secretary Morgenthau announced that, retroactive to January 1st, only gold imports in excess of \$100,000,000 per quarter would be sterilized. Nevertheless, about \$1,200,000,000 remained in the inactive fund in April 1938. On April 14th, the Treasury desterilized this gold, plus \$200,000,000 of other free gold in the Treasury, and the following day the Board of Governors reduced reserve requirements moderately. The combination of these actions was designed eventually to increase excess reserves from \$1,700,000,000 to about \$3,800,000,000.

Actually, with a continued inflow of capital from abroad and an excess of exports, excess reserves of member banks continued to increase, going far beyond the last figure noted. By the fall of 1940, excess reserves had reached nearly \$7,000,000,000 and remained not far from this figure in the opening weeks of 1941.

In 1939, the Federal Open Market Committee abandoned the practice of maintaining a constant portfolio of govern-

ment securities. Difficulty in replacing maturing Treasury bills led to a substitution of longer maturities in the summer of that year, an action which tended to strengthen the longer term markets. Later, in September, with the outbreak of war in Europe, the government bond market broke badly. At this time the Reserve banks increased their "government" portfolio by \$400,000,000 to \$2,800,000,000. Later, the market strengthened markedly. By the end of the year, Reserve bank holdings were down to \$2,500,000,000. A constant total was then held to the middle of 1940. Thereafter, a further strengthening of the market for governments led to further liquidation by the Reserve banks, so that by January 31, 1941, the portfolio had fallen slightly below \$2,200,000,000 to the lowest figure since the fall of 1933.

Federal Reserve policy in 1939 and 1940, then, was directed toward maintaining orderly conditions in the government bond market. It was felt that this policy would exert a beneficial influence on the capital market as a whole and would also help to protect the heavy government portfolios of the member banks.

Variable reserves vs. open market operations as control instruments.— In view of the alterations in reserve requirements undertaken by the Board of Governors since 1936, it is worth while to consider briefly the relative merits of such changes in requirements as compared with open market operations as a means of credit control. An increase in reserve requirements is without question a more effective means of control than the sale of securities in the open market. The reason for this is that an increase of reserve requirements not only eliminates excess reserves, but, at the same time, limits the possible expansion of bank credit on the basis of the excess reserves which remain after the increase. To illustrate, on the basis of the analysis in Chapter XVII, the \$3,000,000,000 of excess reserves in the possession of member banks in the summer of 1936 would have furnished the basis for an expansion of bank credit in the form of demand deposits of approximately \$30,000,000,000. Had these excess reserves been reduced to, say, \$900,000,000 by the sale of \$2,100,000,000 of government securities by the Reserve banks, the excess reserves remaining would still have fur-

nished the basis for a \$9,000,000,000 expansion of demand deposits in the banking system. Reduction of excess reserves to \$900,000,000 by doubling reserve requirements, on the other hand, would limit the expansion based on the remaining excess reserves to about \$4,500,000,000. Thus the ability to change reserve requirements gives the Board of Governors a weapon which is doubly effective as compared with open market operations.

In spite of their efficiency as a control device, alterations in reserve requirements are disturbing to the banking community and should be used only upon rare occasions. Moreover, changes in reserve requirements affect all banks alike, while the effect of open market operations is likely to fall first on the large city banks. Because of this, the latter method of control might be preferable under certain conditions. As a matter of fact, continuously variable reserves based on volume and velocity of bank deposits, as recommended by the Committee on Bank Reserves, combined with a judicious use of open market operations, would be more effective as a means of control than the purely arbitrary power to change requirements as granted the Board of Governors in the Banking Act of 1935.⁵

Outlook for credit control in 1941.—In the early months of 1941, the outlook for the control of credit by the Federal Reserve authorities was not bright. The tremendous increase in excess reserves, already noted, had, in case credit started to expand rapidly, placed such expansion well beyond control by the Federal Reserve, either by open market sales or existing powers to raise reserve requirements. Moreover, the extensive defense program begun by the Administration made the danger of rapid credit expansion much greater than would otherwise have been the case. So grave did the situation appear to the Reserve authorities that a statement, recommending remedial legislation and subscribed to unanimously by the Board of Governors, the twelve Federal Reserve bank presidents, and the Federal Advisory Council, was sent to both houses of Congress on December 31, 1940.

⁵ For an extended and able discussion of the various aspects of this question, see L. L. Watkins, "The Variable Reserve Ratio," *Journal of Political Economy*, June 1936.

So important are the issues involved and so sound the recommendations contained in this document that the report is quoted verbatim as follows :

"For the first time since the creation of the Federal Reserve System, the Board of Governors, the Presidents of the twelve Federal Reserve Banks, and the members of the Federal Advisory Council representing the twelve Federal Reserve Districts present a joint report to Congress.

"This step is taken in order to draw attention to the need of proper preparedness in our monetary organization at a time when the country is engaged in a great defense program that requires the coordinated effort of the entire Nation. Defense is not exclusively a military undertaking, but involves economic and financial effectiveness as well. The volume of physical production is now greater than ever before and under the stimulus of the defense program is certain to rise to still higher levels. Vast expenditures of the military program and their financing create additional problems in the monetary field which make it necessary to review our existing monetary machinery and to place ourselves in a position to take measures, when necessary, to forestall the development of inflationary tendencies attributable to defects in the machinery of credit control. These tendencies, if unchecked, would produce a rise of prices, would retard the national effort for defense and greatly increase its cost, and would aggravate the situation which may result when the needs of defense, now a stimulus, later absorb less of our economic productivity. While inflation cannot be controlled by monetary measures alone, the present extraordinary situation demands that adequate means be provided to combat the dangers of overexpansion of bank credit due to monetary causes.

"The volume of demand deposits and currency is fifty per cent greater than in any other period in our history. Excess reserves are huge and are increasing. They provide a base for more than doubling the existing supply of bank credit. Since the early part of 1934 fourteen billion dollars of gold, the principal cause of excess reserves, has flowed into the country, and the stream of incoming gold is continuing. The necessarily large defense program of the Government will have still further expansive effects. Government securities have become the chief asset of the banking system, and purchases by banks have created additional deposits. Because of the excess reserves, interest rates have fallen to unprecedentedly low levels. Some of them are well below the reasonable requirements of an easy money policy, and are raising serious, long-term problems for the future well-being of our charitable and educational institutions, for the holders of insurance policies and savings bank accounts, and for the national economy as a whole.

"The Federal Reserve System finds itself in the position of being unable effectively to discharge all of its responsibilities. While the Congress has not deprived the System of responsibilities or of powers, but in fact has granted it new powers, nevertheless, due to extraordinary world conditions, its authority is now inadequate to cope with the present and potential

excess reserve problem. The Federal Reserve System, therefore, submits for the consideration of the Congress the following five-point program :

"1. Congress should provide means for absorbing a large part of existing excess reserves, which amount to seven billion dollars, as well as such additions to these reserves as may occur. Specifically, it is recommended that Congress —

- (a) Increase the statutory reserve requirements for demand deposits in banks in central reserve cities to 26% ; for demand deposits in reserve cities to 20% ; for demand deposits in country banks to 14% ; and for time deposits in all banks to 6%.
- (b) Empower the Federal Open Market Committee to make further increases of reserve requirements sufficient to absorb excess reserves, subject to the limitation that reserve requirements shall not be increased to more than double the respective percentages specified in paragraph (a). (The power to change reserve requirements, now vested in the Board of Governors, and the control of open market operations, now vested in the Federal Open Market Committee, should be placed in the same body.)
- (c) Authorize the Federal Open Market Committee to change reserve requirements for central reserve city banks, or for reserve city banks, or for country banks, or for any combination of these three classes.
- (d) Make reserve requirements applicable to all banks receiving demand deposits regardless of whether they are members of the Federal Reserve System.
- (e) Exempt reserves required under paragraphs (a), (b) and (d) from the assessments of the Federal Deposit Insurance Corporation.

"2. Various sources of potential increases in excess reserves should be removed. These include : the power to issue three billions of greenbacks ; further monetization of foreign silver ; the power to issue silver certificates against the seigniorage, now amounting to one and a half billion dollars on previous purchases of silver. In view of the completely changed international situation during the past year, the power further to devalue the dollar in terms of gold is no longer necessary or desirable and should be permitted to lapse. If it should be necessary to use the stabilization fund in any manner which would affect excess reserves of banks of this country, it would be advisable if it were done only after consultation with the Federal Open Market Committee, whose responsibility it would be to fix reserve requirements.

"3. Without interfering with any assistance that this Government may wish to extend to friendly nations, means should be found to prevent further growth in excess reserves and in deposits arising from future gold acquisitions. Such acquisitions should be insulated from the credit system and, once insulated, it would be advisable if they were not restored to the credit system except after consultation with the Federal Open Market Committee.

"4. The financing of both the ordinary requirements of Government and the extraordinary needs of the defense program should be accom-

plished by drawing upon the existing large volume of deposits rather than by creating additional deposits through bank purchases of Government securities. We are in accord with the view that the general debt limit should be raised ; that the special limitations on defense financing should be removed ; and that the Treasury should be authorized to issue any type of securities (including fully taxable securities) which would be especially suitable for investors other than commercial banks. This is clearly desirable for monetary as well as fiscal reasons.

"5. As the national income increases a larger and larger portion of the defense expenses should be met by tax revenues rather than by borrowing. Whatever the point may be at which the budget should be balanced, there cannot be any question that whenever the country approaches a condition of full utilization of its economic capacity, with appropriate consideration of both employment and production, the budget should be balanced. This will be essential if monetary responsibility is to be discharged effectively.

"In making these five recommendations, the Federal Reserve System has addressed itself primarily to the monetary aspects of the situation. These monetary measures are necessary, but there are protective steps, equally or more important, that should be taken in other fields, such as prevention of industrial and labor bottlenecks, and pursuance of a tax policy appropriate to the defense program and to our monetary and fiscal needs.

"It is vital to the success of these measures that there be unity of policy and full coordination of action by the various Governmental bodies. A monetary system divided against itself cannot stand securely. In the period that lies ahead a secure monetary system is essential to the success of the defense program and constitutes an indispensable bulwark of the Nation."

It seems clear to the author that the recommendations of the foregoing report are sound and desirable and may also be necessary if a runaway inflation of credit is to be avoided. Nevertheless, the Administration demonstrated no enthusiasm and no apparent intent to support measures along these lines if introduced into Congress. If this negative attitude continues and suggested legislation is not enacted it may prove most unfortunate.

Conclusion.—We have now concluded a description of actual Federal Reserve policy from the establishment of the system to the present time. In the following chapter, we shall have to consider the theoretic possibilities of credit control in the future. It may well be that the war in Europe and the defense program at home will make a different type of control advisable than that which would be most desirable

under normal conditions. However, the present situation is temporary and the bulk of the next chapter will accordingly be devoted to proper methods of control under peace-time conditions.

REFERENCES

- Beckhart, B. H. *The Discount Policy of the Federal Reserve System*. New York. 1924.
- Beckhart, B. H., and others. *The New York Money Market*.
- Clark, L. E. *Central Banking Under the Federal Reserve System*. New York. 1935.
- Gayer, A. D. *Monetary Policy and Economic Stabilization*.
- Harding, W. P. G. *The Formative Period of the Federal Reserve System*.
- Hardy, C. O. *Credit Policies of the Federal Reserve System*. Washington. 1932.
- Reed, H. L. *The Development of Federal Reserve Policy*. Boston. 1922.
- Reed, H. L. *Federal Reserve Policy, 1921-1930*. New York. 1930.
- Riesler, W. W. *Money Rates and Money Markets in the United States*. New York. 1930.
- Shaw, W. A. *The Theory and Principles of Central Banking*.
- Spahr, W. F. *The Federal Reserve System and the Control of Credit*. New York. 1931.
- Warburg, P. M. *The Federal Reserve System*.
- Whitney, C. *Experiments in Credit Control: The Federal Reserve System*. New York. 1934.
- Willis, H. P. *The Federal Reserve System*.
- Annual Reports of the Board of Governors of the Federal Reserve System*.
- Hearings on the Operation of the National and Federal Reserve Banking Systems*, S. R. 71.
- Proceedings of the Academy of Political Science*, January 1930.

CHAPTER XXXV

FUTURE POSSIBILITIES OF CREDIT CONTROL

Objectives of credit control.—In trying to estimate the possibility of attaining a substantial degree of success in the control of credit in the future, it is necessary first to decide just what the objective of credit control should be. The aim of the central banking authorities may be merely to maintain the convertibility of their notes and deposits into gold and to attain a fair degree of stability in the money market. Secondly, the central bank may endeavor to prevent the overexpansion of credit and thereby avert the more extreme ups and downs of business activity. Lastly, the purpose of credit control may be to maintain stability in the value or purchasing power of the monetary unit.

It goes without saying that, so long as the gold standard is retained, it is essential that the central bank maintain the convertibility of its obligations into gold. But it may be possible to do this and, at the same time, to attempt to prevent the overexpansion of credit or to maintain stability in the purchasing power of the monetary unit. The Federal Reserve system, for example, had large excess gold reserves during the period 1922–1931, and, in the circumstances, was in a position to direct its credit policy toward the maintenance of a stable business structure or of a stable monetary unit, as it saw fit. Assuming, then, ample gold reserves for the purpose, what should be the direction of central bank credit policy?

Stable business and stable money.—It may appear, at first glance, that there is little or no difference between the two objectives of business stability and monetary stability. It will be recalled, however, from the discussion of the pre-war business cycle, that business instability may occur in the form of the business cycle without causing any marked cyclical fluctuations in the general level of prices. If we

accept Snyder's pre-war index, then, as a fairly satisfactory measure of the purchasing power of the dollar, it is clear that the type of credit control which is directed toward the maintenance of business stability is more comprehensive than the type which aims merely at the stabilization of the general price level. In other words, it might be possible to maintain a fairly high degree of stability in the general price level without eliminating or greatly restricting the cyclical movement of business. The attainment of business stability, on the other hand, would almost certainly be accompanied by a stable general price level.

Accordingly, we shall have to conclude that the ideal objective of credit control should be to mitigate the more extreme fluctuations of business since a comparatively stable price level would accompany the attainment of this end.

The theory of credit control.—Assuming stability of business to be the aim of credit policy, the theory of credit control may be summarized as follows:

When business activity is increasing, the central bank takes no action so long as the goods which are being produced are moving regularly and freely through the channels of distribution to the consumer. Credit used to facilitate the production and distribution of goods may continue properly to be expanded so long as it is used productively for these purposes. In the words of the Federal Reserve Board,¹ "credit for short-term operations in agriculture, industry, and trade, when these operations are genuinely productive and non-speculative in character, that is to say, credit provided for the purpose of financing the movement of goods through any one of the successive stages of production and distribution into consumption, is a productive use of credit. But when the effect of the credit used is to impede or delay the forward movement of goods from producer to consumer . . . credit is not productively used. The withholding of goods from sale when there is a market or the accumulation of goods for an anticipated rise of price is not a productive use. It is the nonproductive use of credit that breeds unwarranted increase in the volume of credit; it also gives rise to unnecessary maladjustment between the volume of production and the

¹ *Annual Report of the Federal Reserve Board 1923*, p. 34.

volume of consumption, and is followed by price and other economic disturbances."

When it becomes apparent that credit is being used non-productively, as shown by increasing inventories, rising wholesale commodity prices, and other elements leading to maladjustment, the central bank should attempt to restrict the further expansion of credit by selling open market securities and raising the discount rate. The sale of securities, by decreasing the supply of funds in the market, and the increase in discount rates, by cutting down the demand, should have the effect of restraining the expansion of credit for non-productive purposes. The initial effect of sales of open market securities is to increase the indebtedness of member banks at the central bank, the total amount of credit in use remaining approximately the same. The desire of the member banks to reduce this indebtedness, however, leads not only to a restriction of commercial advances to customers, but also to the withdrawal of funds from the short-term money markets, and, through the sale of high-grade bonds, from the investment market as well. The sale of bonds by the member banks leads to a rise in bond yields (i.e., a fall in bond prices), thus making long-term bond financing unprofitable, while the withdrawal of funds from the short-term market for brokers' loans tends to decrease bull speculative activity and to bring about a decline in stock prices with a corresponding decrease in the desirability of long-term financing through the issuance of stocks.

It will be seen from the foregoing analysis that the action of the central bank merely attempts to introduce quickly, and before the maladjustments in the business structure have gone too far, the same type of pressure which finally terminated the expansion phase of the typical pre-war business cycle.

As soon as the readjustment of the business situation has begun to take place, the policy of the central bank should be quickly reversed. By purchasing open market securities funds may be pumped into the market, while a decrease in discount rates tends to stimulate the demand for credit. The initial effect of the purchase of open market securities will be to bring about a reduction of member bank indebted-

ness at the central bank. With this reduction, member banks become more liberal in granting commercial loans to customers and also increase their open market loans and their purchases of high-grade bonds. The latter moves tend to stimulate bull speculation in the stock market and to harden bond prices, thus making long-term as well as short-term financing attractive. In short, once again, the central bank attempts to hasten the readjustment of business by introducing quickly and artificially the factors which naturally make for an upturn in business activity.

Prevention of overexpansion real object.—Although the theory of credit control, as just outlined, requires the intervention of the central banking authorities when business is both on the up- and the down-grade, it should be clear that the prevention of overexpansion, i.e., the prevention of the non-productive use of credit, should be the real object of the control of credit ; for the development of maladjustments in the business structure necessitates subsequent readjustments, and the extent of the latter depends in large part upon the extent of the former. To the degree, therefore, that the non-productive use of credit can be avoided when business is expanding, the later readjustments can likewise be avoided. Moreover, if overexpansion has progressed far, the attempt to mitigate the severity of the ensuing readjustments may have the effect of delaying their completion and lengthening the period of recession and depression.

The success and failure of Federal Reserve credit policy.—Recalling the description of Federal Reserve credit policy in the preceding chapter, it appears that reserve policy was successful in 1923-24 and in 1925-26, but that it was not successful in 1928-29 and in the following depression. In the earlier periods, the accepted procedure with respect to open market operations and discount rate changes was apparently effective. We may, for the present, pass by these earlier endeavors at control and direct our attention to the difficulties of 1928-29 and subsequent years.

The policy of the Federal Reserve was beset with especial difficulties in 1928 and 1929 because of the conflicting nature of the evidence in regard to the business and the financial situations. It has already been noted that the business situa-

tion seemed unusually sound at this time, the flow of goods to market being unimpeded and regular, and the wholesale commodity price level showing an extraordinary degree of stability. The financial situation, on the other hand, was decidedly less reassuring. Speculation was running rife in the stock market and loans to brokers for purposes of stock speculation were increasing rapidly. The problem of the proper central banking policy to pursue, in the circumstances, was perplexing. Some presumably capable observers averred that the Federal Reserve's sole responsibility was to maintain a stable level of commodity prices and that the speculative mania in the stock market was outside the scope of correct central banking policy. The Federal Reserve authorities, however, being directed by the Act to prevent the use of Federal Reserve credit for purposes of security speculation, finally felt compelled to take steps to curb the expansion of security loans, although the effort was largely unsuccessful.

The overexpansion of commercial and investment credit. — The question of prime interest in the present connection is not so much whether the Federal Reserve authorities were justified in attempting to prevent the use of Federal Reserve credit for purposes of security speculation in obedience to the law, but rather whether or not the dictates of sound credit policy indicated such a course. To answer this question it is necessary to draw a distinction between two kinds of credit inflation. One of these may be termed investment inflation and the other commercial credit inflation. We shall consider both of these types in some detail.

Investment inflation. — If business stability is to be maintained, it is necessary that goods be produced and distributed without undue interruption and delay, and this requires the existence of the desire and ability of consumers to purchase the goods offered on the market. A part of the income of consumers will be diverted to investment purposes, through the purchase of bonds or other securities; the remainder will be devoted to the purchase of consumption goods and services. Minor readjustments will have to be made in industry from time to time as consumer demand shifts from certain types of goods to others, or from consumption to

investment goods ; but, so long as money income is spent fairly regularly for goods and services of some sort, whether investment or consumption, no major upward or downward movements in business as a whole should occur.

Let us suppose, however, that a certain large number of individuals, wishing to have their cake and eat it too, continue to spend a large portion of their incomes on consumption goods, but also buy substantial amounts of securities, paying for the latter in the main with borrowed funds. So long as the borrowed funds come from the money income of the lenders, the situation would not be greatly changed, for the purchasing power would then merely be transferred from the lenders to the borrowers and would be spent by the latter. If, on the other hand, the borrowers obtain their loans from the banks, the latter crediting the checking accounts of the borrowers with the amounts of the loans, the quantity of purchasing power in the form of the check currency is increased, and the funds borrowed are not deducted from the income of others. The result is what we shall term investment inflation.

But what is the objection to this procedure, provided that, as seemed to be the case in the years prior to 1929, the increased purchasing power is largely offset by increased amounts of goods and capital ? The danger lies in the fact that the loans are not perpetual and will have to be repaid at some later date. If a concerted demand for repayment occurs, the amount of purchasing power available to buy consumption goods is quickly reduced, while the repayment of the loans results in a contraction of the check currency rather than in a transfer of money to individuals who would themselves spend it for goods. Moreover, the process of liquidating security loans is likely to be long drawn out, since the loans must be largely paid off by degrees from the income of the borrowers.

Illustration from the experience of the United States.—

The situation in the United States, before and after the stock market crash, is illustrative of this point. The security loans of all member banks of the Federal Reserve system increased by just over \$3,000,000,000 between June 1925 and June 1929. This increase naturally permitted an increase of

security prices on the stock exchange and was one of the conditions essential to the speculative orgy which culminated in October 1929. Following the break in the stock market, call loans to brokers were sharply reduced, but a large part of this reduction was a result of the shifting of call loans to brokers to customer loans on securities, the total of member bank security loans (brokers' loans plus customer loans) increasing very slightly during the remainder of the year. Between the close of 1929 and December 31, 1931, total security loans of member banks decreased by over \$3,000,000,000, bringing the amount of such loans back to the level of June 1925.

A reduction of security loans of this magnitude is certain to reduce consumer purchases of goods and services. As security prices fall, the bankers require added collateral, or a reduction of loans to a point where existing collateral is adequate, and the borrower must needs use part of his income to meet the banker's requirements. Often, rather than lose his stocks and bonds through forced sale by the banker, the borrower will cut his consumption to a minimum in order to reduce his indebtedness at a time when his own income may have shrunk because of the depression. Moreover, the sale of collateral by bankers to protect their loans in cases where the borrowers are unable to maintain satisfactory margins exerts a continuously depressing effect on security prices, making the reduction of previously adequately margined loans necessary by weakening or eliminating the margins.

It is not intended to imply that the liquidation of security loans was the only important force making for the duration and intensity of the depression following the downturn in business in 1929. Widespread bank failures resulted in a loss of confidence in the banks and an accompanying increase in currency hoarding, which factors, in turn, increased the difficulties of the banks and made further liquidation of loans and investments imperative. Nevertheless, the liquidation of investment loans was a complicating and disturbing factor throughout and cannot be lightly dismissed.

The control of investment credit expansion.—It must be admitted, however, that the expansion of investment loans by the banks in the years prior to the stock market

crash was unusually rapid. It is therefore pertinent to ask whether such credit expansion could not be controlled, along with the expansion of commercial credit, by the central banking authorities. There are two reasons for believing that control of this sort would not be likely to prove successful.

In the first place, it is difficult to determine exactly when overexpansion of security loans may be said to exist. About the only feasible method of ascertaining this point would be to govern the expansion of such loans by the market prices of the securities purchased with the proceeds of the loans. It would be necessary for the banking authorities to endeavor to put an end to the expansion of security loans when stock prices, say, averaged more than ten times earnings. But this is an entirely arbitrary procedure. With the increase in capital accumulation over a period of years, it might well be that fifteen times earnings would represent a more reasonable valuation.

Any other basis than stock prices, as a criterion of overexpansion, is even less satisfactory. The existence of speculative commitments as a guide to credit policy is ruled out by the fact that stock speculation is always existent in some degree. Moreover, any attempt to determine the exact lengths to which speculation may proceed, without going beyond the range of control through rate advances, is more likely to be futile than not.

A second deterrent to the successful control of investment credit expansion is to be found in the inability of the banking authorities to time their restrictive policy to meet the needs of both commercial and investment credit policy. It is quite possible that business may be proceeding satisfactorily, commercial credit being productively used, at a time when a restriction of investment credit is deemed desirable. To tighten money in order to restrict the expansion of investment credit at such a time would be to hamper business unnecessarily and improperly. Failure to take restrictive measures, on the other hand, would court speculative excesses and final drastic reaction in the stock market.

The solution of the difficulty would appear to be legally to prohibit the creation of check currency for the financing of any but commercial commitments, giving the central bank-

ing authorities the right to define legitimate commercial loans within the meaning of the law, as the Board of Governors now defines and rules on eligible paper. If security and other investment loans were limited in amount to savings deposits, properly defined, there could be no overexpansion of investment credit as the term has here been understood.

Bond investments of banks.—It is also possible to create check currency through the purchase of bonds by the banks. In periods of depressed business, as the banks have acquired surplus reserves through the contraction of commercial loans, they have tended to use these reserves to purchase high-grade, marketable bonds, thus preventing the check currency from contracting as would otherwise be the case. This form of investment credit expansion, however, differs from that resulting from the extension of security and investment loans in that the timing of the expansion assists, rather than hinders, credit control. The effects of bond purchases in a period of depression are to raise bond prices, making long-term financing more attractive, and to furnish a quantity of check currency which may assist the recovery of business.

In a period of depression it will usually be found that cash-balances have increased, or, in other words, that the income velocity of circulation has declined. The creation of check currency through bond purchases tends to offset somewhat this decrease in velocity by increasing the purchasing power of the sellers of the bonds. The funds so received may not, probably will not, be used at once to purchase goods, but are more likely to be devoted to the retirement of indebtedness previously incurred in the period of more active business. By helping to hasten the debt retirement process, however, the banks, through their bond purchases, help to place business in a position where recovery will most readily occur.

Another factor which differentiates bond purchases from security loans is the ease with which the former may be controlled by the central banking authorities as compared with the latter. Since bonds are commonly purchased with the banks' surplus reserves in times of depression, a revival of demand for commercial loans naturally leads to a liquidation of bonds by the commercial banks in order that they may obtain the funds to meet the demands of commercial bor-

rowers. The process of liquidation can easily be hastened by the central bank, if deemed necessary, through the sale of open market securities. In the opposite fashion, the purchase of open market securities in the course of the depression can be used to stimulate bond purchases on the part of the commercial banks. Thus the central bank has adequate means of controlling the situation.

If the commercial banks have conducted their business along sound lines (i.e., have extended only commercial credit) in periods of expanding business, the purchase of bonds in periods of depression is not likely to be a source of embarrassment or danger. When, on the other hand, the banks enter the depression period with a large mass of slow, non-liquid loans, the purchase of large quantities of bonds may prove disastrous. The failure of a number of banks, as a result of their frozen condition, may well lead to a loss of confidence in the banking system attended by bank runs by both demand and savings depositors. The result is a rapid and concerted liquidation of bonds by the banks which leads to a break in the bond market and an enhancement of banking difficulties. This explains, in part, the futility of the easy money policy of the Federal Reserve in 1931 as well as the disastrous slump in bond prices in the closing months of that year.

The control of commercial credit expansion.—Assuming that the banks are not permitted to create deposit currency on the basis of investment loans, our next task is to appraise the possibility of controlling the expansion of commercial credit by the central bank through open market operations and alterations in the discount rate. The manner in which the presence of overexpansion is detected has already been shown. So long as production is on the increase; so long as the transportation system is working efficiently; so long as employment indexes show idle labor which can be put to productive use; so long as goods are passing to the consumer at a satisfactory rate and excessive inventories are not being accumulated; in short, so long as credit is being productively used, there is not overexpansion. When the non-productive use of credit appears, on the other hand, overexpansion exists in some degree.

The question which remains to be answered is whether overexpansion, having been detected, can be controlled by the method of tightening money rates. Will the rate increases resulting from central banking policy be effective in securing the desired curtailment of credit? There seems to be doubt in the minds of some. Snyder writes,² "The direct effect of interest rates upon the course of the business cycle seems less than many have supposed. . . In the main the more important changes in business seem to take place before the movement of interest rates could be of any material importance. All of which has an important bearing upon the problem of stabilizing trade or moderating the extremes of the business cycle by means of changes in the bank rate." This evidently is meant to imply that changes in the bank rate are fairly useless in the control of business expansion through the regulation of the amount of credit. Can anything be said on the other side of the question? While it is true, as Snyder points out in another place,³ that bank interest forms such a small part of the cost of doing business for the run of producers as to be of little moment, this is not true in respect to the bulk of speculative activity. Speculation, whether in goods or securities, is done largely on a credit basis. Here interest is practically the sole cost of doing business. When merchants stocked up heavily with goods on the up-swing of the typical pre-war business cycle, because they expected the prices of these goods to advance, they carried the goods almost entirely by means of credit advances. After prices had begun to mount rapidly, an increase of moderate amount in the discount rate (the price of carrying the goods) naturally would have had little effect, but an increase coming before the rise in prices became pronounced would unquestionably have had a strongly deterrent effect on such operations.

In the main, just such speculation in goods is to be blamed for some of the major difficulties which have occurred in the past during the up-swing of the business cycle. The increase in forward ordering many times has led manufacturers to overestimate the intensity of the consumer's demand for

² *Business Cycles and Business Measurements*, 1. 229.

³ *Ibid.*, p. 227.

their goods, with resultant misguided and misdirected production. It seems reasonable to suppose that increases in discount rates, if made effective at an early enough period in the cycle, would put a damper on this speculative propensity of merchants and would result in a more reasonable adjustment of productive activity to consumer demands on the part of manufacturers. This being the case, it would make little difference whether bank interest were a minor cost to the manufacturers themselves or not.

The effectiveness of central bank policy, then, would seem to depend in large measure upon the proper timing of the steps taken to restrict expansion. There is always a tendency, in periods of expanding business activity, to wait too long before introducing restrictive measures, with the result that, when steps are finally taken, they must necessarily be more severe, and will probably be less effective, than would have been the case had they been followed at an earlier point.

Complete stability unattainable. — Although the control of commercial credit may be fairly successful if central banking action is properly timed, the complete elimination of cyclical movements in business is not to be expected. It may be pointed out, for example, that a wide-spread increase in installment selling, such as occurred between 1922 and 1929, results in an increase in the production and sale of goods which cannot be permanently maintained. Changes in the spending habits of the community of this sort are outside the range of central banking control, yet may have significant effects on business activity. Changes in the financing methods of business concerns, such as resort to the capital market to obtain working capital funds, are also likely to hamper central banking control of commercial credit expansion. In addition, errors in judgment on the part of the central banking authorities as to the proper timing of control measures are bound to occur and may vitiate the success of these measures. Nevertheless, a relatively high degree of stability should be attainable if the banking authorities are properly equipped to handle the situation under the most favorable circumstances.

Commercial credit deflation short-lived. — Even assuming the failure of the central bank to prevent an over-expan-

sion of commercial credit, whether from undue delay in initiating restrictive measures or from the operation of factors outside of its control, the ensuing deflation will be relatively short-lived as compared with the deflation of investment loans. Any deflation of credit involves loss and suffering to certain parties. In the case of commercial credit deflation, the loss falls heavily upon business men. Goods must be offered at prices lower than cost in order to move them, inventories must be written down to the new market valuations, and debts must be paid without any corresponding reduction. Many small, inefficient enterprises may go to the wall, but the better-managed concerns, although suffering substantial losses, continue to survive. The economic indigestion, however, is quickly cured. Excess goods are eliminated from the system, and, after a brief convalescence, normal functioning is again in order.

We have already seen, on the other hand, that the liquidation of investment loans out of income in a period of depression is a long and painful process, reducing the consumption demands of the borrowers and hindering business recovery. If investment loans, other than those based on real savings, could be eliminated, therefore, periods of business depression should be considerably shortened. If, in addition, the central banking efforts at credit control are moderately effective, the amplitude, as well as the duration, of cyclical swings in business would be very materially decreased.

Legislative changes essential.—If the Board of Governors is to be properly equipped to undertake the control of credit in the United States with some probability of continuous success, certain alterations in the banking laws are essential. In the first place, as already suggested, it is necessary to eliminate the creation of check currency based on investment loans. As call loans to brokers fall into this class, this reform would be extremely difficult to effect. Brokers' loans have always been considered as an excellent secondary reserve by the banks, and any attempt to substitute loans based on savings deposits for the existing type of call loans to brokers would arouse bitter opposition. Nevertheless, such a change is essential to adequate credit control, as the events of 1927-29 should demonstrate.

In the second place, time deposits should be more strictly defined than at present to represent real savings rather than temporary funds masked as investment surpluses. In this connection it would assist matters to require the segregation of the assets of the savings departments of departmental banks with a view to preventing the intermingling of commercial and savings functions.

Thirdly, since speculative activity in business tends to show up first in an increased velocity of turnover of the check currency, it might be well to institute a reserve requirement for demand deposits based on a combination of volume and activity, as suggested by the Committee on Bank Reserves of the Federal Reserve system.

Finally, and perhaps most significant, a unified banking system is needed. It would be highly desirable to require all banks doing a commercial business to become members of the national banking system, or, at least, to join the Federal Reserve system. Non-member state banks would then be restricted to a purely savings or trust business as they properly should be. It seems needless to point out that the present heterogeneous mixture of state and national, member and non-member banks, many of them engaged in all types of banking without proper segregation of the business of the different departments, is not conducive to successful credit control by the Federal Reserve system. Such control depends essentially on full co-operation between the individual banks of the system and the central bank, and such co-operation can only be acquired, in turn, through a unified and closely knit banking system.

Credit control and the defense program.—The Board of Governors of the Federal Reserve System, under Chairman Eccles, has appeared to favor purely quantitative control of credit, without regard to the use to which the borrowed funds are put. In the opinion of the author, such control, while better than nothing, is not the type to attain the highest degree of business stability for reasons presented in the present chapter.

The inauguration of the defense program in 1940, while not invalidating the principles set forth in preceding pages, brings new problems to the fore. Perhaps the most impor-

tant problem, in view of the existent credit situation, is to prevent a general inflation of bank credit of either the commercial or investment type.

As for commercial credit inflation, once the productive resources of the country are fully employed, further expansion of ostensibly commercial loans will not increase production, but will lead to rising prices through competition of producers for labor and supplies. There are more than ample excess reserves to support the economic machine to a point of full productivity.

The Board of Governors, however, cannot alone prevent inflation, even if given the powers requested in the previous chapter. It is important that the financial program of the government be sound. Sound financing of the defense program requires the payment of as large a share of expenditures as possible from taxes. If the entire program cannot be financed in this way, added funds should be raised by the sale of government obligations outright to investors. These obligations should be paid for in full out of savings and should not be permitted as security for bank loans or as bank investments.

If the Board of Governors of the Federal Reserve System were given the control powers they ask and if the Treasury were to finance its program as suggested in the preceding paragraph, the chances of preventing a severe inflation of bank credit would be good. Defense expenditures would be financed out of taxes and savings and the Board of Governors could then concentrate attention on preventing the expansion of commercial or business loans beyond the point where further expansion would not be productive of added goods coming into the market. Whether these policies will be adopted or not remains to be seen.

Conclusion.—There remains one major monetary problem to consider, namely, the problem of the standard. This is of future rather than of current interest and importance. There is now no international standard, but the time will come, when hostilities have ceased, when the question of international monetary arrangements will again become of outstanding significance. The following chapter, therefore, will be devoted to a consideration of this question.

REFERENCES

- Bellerby, J. R. *Monetary Stability*. London. 1925.
- Bernstein, E. M. *Money and the Economic System*. Chapel Hill. 1935.
- Durbin, E. F. M. *The Problem of Credit Policy*. New York. 1935.
- Edie, L. D. *Money, Bank Credit and Prices*.
- Fisher, I. *Stabilizing the Dollar*. New York. 1920.
- Fisher, I. *100% Money*.
- Gayer, A. D. *Monetary Policy and Economic Stabilization*.
- Goodbar, J. E. *Managing the People's Money*. New Haven. 1935.
- Hawtrey, R. G. *Good and Bad Trade*. London. 1913.
- Hawtrey, R. G. *Monetary Reconstruction*. London. 1923.
- Hawtrey, R. G. *Trade and Credit*. London. 1928.
- Keynes, J. M. *Monetary Reform*. New York. 1924.
- Keynes, J. M. *A Treatise on Money*.
- Keynes, J. M. *General Theory of Unemployment, Interest and Money*.
- Lawrence, J. S. *The Stabilization of Prices*. New York. 1928.
- Margat, A. W. *The Theory of Prices*, Vol. I.
- Robertson, D. H. *Banking Policy and the Price Level*. London. 1926.
- Shaw, W. A. *The Theory and Principles of Central Banking*. London. 1930.

CHAPTER XXXVI

THE PROBLEM OF THE STANDARD

Introduction. — Between the 1870's and the Great War, the gold standard was in general use throughout the civilized world and was considered by the majority of monetary theorists, as well as by practical men of affairs, to be the best standard available. The advent of the Great War, with its attendant currency disorder, naturally focused attention on monetary affairs and raised the question whether the gold standard was, after all, as satisfactory as had been supposed. Various reformers, after the War, suggested substitutes of the "managed currency" genus, but the governments concerned finally decided to return to gold, with the result that, by 1928, the gold standard was again in practically universal use. In this later period, however, the standard failed to function with its accustomed pre-war efficiency, and in the closing months of 1931 a large number of countries found it either necessary or expedient once more to depart from gold as a standard of value. The problem of the standard accordingly remains in the limelight, and it is necessary to examine the question in some detail in order to determine the most practicable solution.

The pre-war gold standard. — Although the normal functioning of the gold standard has been described at various points in preceding chapters, it is advisable, at the risk of some repetition, to bring together the threads of the discussion at this point in order that the difficulties encountered in the post-war period may be compared directly with the operation of the gold standard under more normal conditions.

The full gold standard is in existence when a country redeems all of its moneys in gold, placing no obstacles in the way of the use of the gold so obtained either in the arts or for export to other countries, and when gold is freely and gratuitously coined or is freely exchanged for one or

more of the moneys of the system. In short, so long as a free flow of gold both into and out of the monetary stock is permitted, a full gold standard exists.

Under the conditions set forth in the preceding paragraph, the functioning of the international gold standard is largely automatic and reciprocal. If prices rise in one country out of proportion to the rise in prices in other countries, gold will tend to flow from the former to the latter. The outflow of gold from the first country tends to contract the circulating medium of that country and through a series of reactions already considered (Chapter XXIX), to reverse the conditions which caused the export of gold. In the country or countries receiving the gold, on the other hand, exactly opposite reactions are set up which also work in the direction of stopping or reversing the inflow of gold. Thus gold tends to be distributed automatically in accordance with the need for it.

In the pre-war period, the gold standard functioned fairly satisfactorily in the manner indicated. Such artificial control of gold movements as was practiced by the Bank of England, and other central banks, was in the direction of giving effect to gold movements rather than offsetting them, the central bank's gold reserve being used as a criterion of credit policy. Although the foreign loans and investments of some countries were large, this factor did not interfere appreciably with the effectiveness of gold movements as the chief creditor countries did not try to prevent interest and debt payments being made in goods by raising tariff barriers against imports. Accordingly, the international movement of goods, which was governed largely by price movements of international goods and services, determined the direction and extent of major gold movements.

The gold standard in the post-war period.—The resumption of the gold standard by the leading countries of the world in the period of monetary reconstruction following the War was hailed by many as the crucial step in the direction of a return to normal conditions. The subsequent widespread breakdown of the gold standard, on the other hand, led many observers to believe that, through some unaccountable change, the standard had lost much of its pre-

war effectiveness and that a change to some other basis was accordingly indicated. In order to test the validity of the latter position, it will be necessary to ascertain the reasons for the failure of the gold standard to live up to its earlier reputation. The chief factors which interfered with the traditional functioning of the gold standard in this later period will accordingly be briefly discussed.

Lack of reciprocal action.—The reciprocal action which helped to make gold movements effective in the pre-war period was often lacking in respect to post-war gold movements. This was a result, in part, of the wide resort to the use of the gold exchange standard in the period of monetary reconstruction. To illustrate, if the Reichsbank, being allowed to count as part of its required reserve deposits in New York City banks, redeemed some of its notes in the form of a draft on a commercial bank in New York, its own reserve was reduced accordingly. In the United States, however, a deposit credit was merely transferred from the account of the Reichsbank to the account of the party receiving the draft, total deposits remaining the same as before. Consequently, no reaction tending to ease the credit situation in the United States occurred, the effectiveness of the loss of reserve by the Reichsbank being thereby cut in half.

Another factor tending to decrease the reciprocal action of gold movements was the failure of central banks, in many instances, to give effect to such movements. The Bank of England, for example, submitted to a long-continued loss of gold to the United States in 1928 and 1929 without raising its discount rate until it was absolutely necessary to do so, the object being not to restrict business any more than was necessary by raising rates. The Federal Reserve Board, on the other hand, being engaged in an attempt to curb the stock market boom, was tightening rather than easing credit in spite of the gold inflow. As a result, the natural reactions at both ends of the gold movement were in large part nullified by the action of the central banks concerned.

War debts and reparations.—The situation was also complicated by the necessity of making payments on intergovernmental debts contracted during the War and the payment of reparations by Germany. These payments had to be made

to specific countries at specific times regardless of the state of international trade or the foreign exchange markets. Moreover, as the payments were relatively large and did not result from earnings on profitable investments, they naturally led to a considerable amount of confusion in the international exchange market, resulting often in unusual shipments of gold. The payment of these claims in goods might have been effected eventually, however, had it not been for another factor which must next be considered.

Interference with natural movements of goods.—Following the War there was a widespread increase in tariff barriers in many countries. Some of these tariffs were raised during the period of irredeemable paper money in order to prevent too great an inflow of goods from countries whose currency was depreciating; but they were retained and, in many instances, raised further after the return of the majority of the countries to the gold standard. The United States, who was the chief beneficiary of the War debt payments, was probably the worst offender. By raising her tariffs, while yet insisting on the repayment of these debts, she took the course best calculated to prevent their payment in goods—the only method by which such payment could finally be made. Up to a certain point, of course, payments could be made in gold, and the United States did receive large gold imports. The payments received, however, which were far in excess of the increase in gold stock, continued as long as they did because of another factor in the situation.

Improvident foreign lending.—The United States engaged in foreign lending on a wide scale by purchasing bonds issued in Germany, some other European countries, several South American countries, and elsewhere. The payment of German reparations (which, in turn, led to payment on war debts to the United States) was thereby made possible, while, at the same time, the United States was enabled to maintain an export balance of trade. Just as the extension of installment selling permitted the people of the United States to buy large amounts of goods out of future income, the extension of foreign credits by our business men, banks and investors enabled foreigners to buy goods from us, for

a time at least, without selling us an equivalent amount in return. Under the circumstances, any cessation of this policy of foreign lending was certain to give rise to grave difficulties.

Had nothing occurred to diminish the rate of foreign lending, the United States might have continued with an export balance of trade for some time. Eventually, the interest payments would have exceeded the new loans and the trade balance would have had to be reversed, a procedure which would have necessitated a reduction in tariffs. Unfortunately, however, many of the loans were improvidently made, and the proceeds were frequently used for improper or non-productive purposes. As a result, any long continuance of the policy of foreign lending was improbable.

Inflexibility of prices.—Another factor of importance in explaining the failure of the gold standard to function in traditional fashion was the irresponsiveness of certain groups of prices to central banking control. The operations of various international cartels tended to make price movements inflexible in respect to the goods controlled by these organizations. Attempts to control the price of various raw materials—rubber, sugar, silk, coffee, wheat, etc.—also interfered with the natural adjustment of prices to economic conditions. Finally, wages had become unduly rigid in some countries. The difficulties encountered by England after her return to the gold standard in 1925 were largely the result of an inflexible system of wages which could not be reduced to the extent necessary to permit England to regain her quota of export trade in competition with foreign countries. Central banking pressure led to reduced business and an increase in unemployment rather than to fundamental readjustments. Had England devaluated the pound upon her return to gold, this difficulty would have been largely eliminated. As it was, however, it played an important part in contributing to the ineffectiveness of gold movements into and out of England.

The question of confidence.—In addition to these underlying factors, the period was characterized by variations in confidence which resulted in the transfer of large sums from center to center upon the least provocation, quite irrespective

of the movement of international trade, comparative rates of discount, and other forces which normally determine the distribution of funds in various financial centers. This factor, moreover, resulted in a plethora of short-term funds, which could be quickly recalled, and a relative scarcity of long-term funds which were much needed for reconstruction purposes. The result was a utilization of short-term funds for long-term investment purposes, thus introducing a highly dangerous element into the situation in the event of a loss of confidence. The increase in short-term funds was accentuated by the extension of the gold exchange standard, and by the balances accumulated by the Bank of France in connection with the stabilization of the franc, the repatriation of the latter leading to abnormal and disturbing gold movements.

The final breakdown. — The immediate causes of the final breakdown of the international gold standard near the end of 1931 were a series of confidence crises brought about by the world depression. Even before the stock market break, the flotation of foreign securities in the American market declined sharply. After the crash in the stock market, foreign lending vanished almost completely. The countries which had been most dependent on loans from the United States were therefore hard put to it to obtain the funds needed to service their debts and meet their other financial obligations in the way of reparations and War debt payments. Payments were met temporarily by the curtailment of imports through exchange restrictions, by obtaining short-term credits, and by exporting gold. Attempts to develop an export surplus by the restriction of imports led to what amounted to forced sales of goods in foreign markets, thus depressing prices still further and leading to higher tariffs or other import restrictions in the buying countries. The exportation of gold was, of course, of limited duration, since it was impossible to meet payments indefinitely by this means and still maintain adequate reserves. The short-term commercial credits, upon maturity, could not be paid, it being necessary for creditor banks to arrange "standstill" agreements with the debtor countries to give the latter time gradually to liquidate these credits.

The failure of the Credit Anstalt in Austria under these

strained conditions precipitated a confidence crisis which spread to Germany and, later, to England, the English banks being known to have had rather large commitments in the disturbed centers on the Continent. Large withdrawals of funds from England finally compelled the abandonment of the gold standard in September 1931, various other countries quickly following suit. Even the United States suffered a large loss of gold, but was not compelled to abandon the gold standard. Japan suspended the gold standard in December, leaving only some half-dozen important countries on a free gold basis at the end of the year.

The gold standard not a failure.—The foregoing summary of the forces which led to the breakdown of the gold standard in the post-war period, although fragmentary and inadequate, is sufficient to demonstrate clearly that the gold standard is not itself to be blamed for either the world depression or the monetary difficulties of the post-war era. The roots of the difficulty penetrate far beyond what is merely a mechanism for effecting and regulating international payments. Like any mechanism, it will work well under proper conditions. In order that it may function properly, then, it is necessary to provide the conditions under which it may be effectively utilized. The gold standard itself is no more a failure than an automobile which refuses to run smoothly because there is dirt in the carburetor and the front wheels have been detached from the steering gear. The really surprising thing is that the gold standard was able to function at all under the circumstances.

The way to the effective functioning of the gold standard lies, as noted, in a return to the conditions under which it may properly be expected to operate. Perhaps, however, the advantages of the gold standard are not sufficient to make it worth while to restore these essential conditions. Before deciding this question, we shall have to determine just what are the characteristics of an ideal standard of value, and, having done so, to examine the advantages of a managed currency as compared with gold.

The ideal standard.—It has been assumed throughout this book that the standard of value should have a constant purchasing power over consumption goods and services.

There are, however, other possible standards for which a good case can be made. It will be necessary to examine these other possibilities, therefore, before attempting to appraise the relative merits of the gold standard and some type of managed currency system.

A stable income standard.—There is much to be said for a standard of value which remains stable in terms of money income. From the point of view of justice, this is more satisfactory than a stable consumption standard. Under a stable income standard, the total amount of money would have to be kept stable relatively to population. Then, if the economic productivity of the country were to increase more rapidly than the population, the goods price level would tend to fall. If, on the other hand, productivity were increasing less rapidly than population, or were actually decreasing, the price level of goods would tend to rise.

A goods price level which varied inversely with productive activity in the manner suggested would yield the greatest degree of justice to creditors, for they would then participate with the other classes in the community in either an increase or a decrease in productivity. To illustrate, a creditor who had loaned \$1000 at a given date would have parted with purchasing power over a quantity of goods which we shall call x . Ten years later, say, when the loan is repaid, the productivity of the country has increased relatively to population by one-fourth. At the maturity of the loan, then, the \$1000 would purchase $1.25x$ goods, and the creditor would share in the increased productivity, not at the expense of the entrepreneur who would have more goods with which to repay the loan, but merely in proportion to the increase in goods which his capital helped to make possible. If productivity were decreasing, relatively to population, on the other hand, the creditor would quite properly share in the decrease.

When a country has an inflexible system of wages, a stable income standard also has definite advantages. In such circumstances, money wages, like debt and interest payments, tend to become fixed in amount. The same advantages, therefore, would apply to the laborer and salary earner as to the creditor under such a standard.

The maintenance of a stable income standard, however, is not always compatible with the operation of the international gold standard. For example, if, in country *A*, productivity is decreasing (the goods price level rising), while, in country *B*, productivity is increasing (the goods price level falling), gold will begin to flow from *A* to *B*. An attempt on the part of *A* to maintain a stable income standard under these conditions would result in a continuance of the gold outflow until *A* would be forced off the gold standard.¹

A gently rising price level.—While justice to creditors and other recipients of fixed money incomes may seem to demand a stable income standard, there is evidence to indicate that such a standard is not conducive to a high degree of business activity. Dr. Willard Thorp, in a study of business annals, found that, in England, the number of years of prosperity per year of depression amounted to 1.0, 3.3, and 2.7 in three periods in which the trend of the wholesale price level was upward, as compared with 0.9 and 0.4 in two periods characterized by downward trends. In the United States, the figures were 2.6, 2.9, and 3.1 with rising trends of the commodity price level, and 0.8 and 0.9 in two periods in which the trend was downward.² It seems impossible not to agree with Dr. Mitchell that "these results are so uniform and so striking as to leave little doubt that the secular trend of the wholesale price level is a factor of great moment in determining the characteristics of business cycles."³

Because of the significance of the trend of commodity prices on business activity, it may be urged with some force that the most satisfactory sort of currency regulation would have as its objective the maintenance of a gently rising commodity price level. This type of regulation would have to be effected at the expense of some justice to the recipients of fixed money incomes; but it may not be thought too outrageous to wink at the blindfolded lady with the scales if the industrial plant can thereby be more regularly and completely utilized and the labor force of the country more fully employed.

¹ See the *Report of the Gold Delegation*, League of Nations, Geneva 1932; p. 28.

² See W. C. Mitchell, *Business Cycles* (New York 1927), pp. 410-411.

³ *Ibid.*, p. 411.

The type of credit control which is directed toward the maintenance of a gently rising price level is also incompatible with adherence to the gold standard. It might be accomplished for a time by the institution of various economies in the use of gold for monetary purposes. Eventually, however, without the discovery of improbable new sources of gold production, the gold basis of the currency would become so attenuated as to make necessary a departure from the gold standard.

A stable consumption price level.—A stable price level of consumption goods and services is now seen in the light of a compromise standard which retains in part the characteristics of both of the standards previously described. Under such a standard, the recipients of virtually fixed incomes (bondholders, salaried workers, doctors, etc.) do not share in an increase in national productivity to the extent which they would under a stable income standard. Neither, however, do they share the burden of decreased productivity in periods when the trend of productive activity is downward. In fact, due consideration would seem to indicate that the creditor is not so badly off under a stable consumption price level as it might appear at first glance. After all, the bondholders—the chief creditor class—are mainly concerned with safety. If they get repaid, in interest and principal, in dollars which will purchase the same amount of goods and services as the dollars loaned, they have small cause for complaint. It is the entrepreneurs who take the risk of success or failure, and, if they profit somewhat at the expense of creditors when successful, it is perhaps not improper that they should. The capitalist has the choice of buying stock rather than bonds if he so desires. Therefore, if he chooses bonds, he has little right to complain if he gets back the same amount of goods and services with which he parted, plus interest on his investment.

Through permitting the gains from increased efficiency to go to the entrepreneur, on the other hand, a stable consumption price level offers a stimulus to industry which, although less than that of a rising price level, should be ample to maintain a high rate of productive activity with greater justice to creditors than a rising price level would

afford. Our conclusion then must be that a stable consumption price level affords the most satisfactory standard of value from all points of view and that it is, therefore, the standard which we should attempt to maintain.

THE CASE AGAINST THE GOLD STANDARD

The gold standard and a stable price level.—Since, when the gold standard is functioning properly, the effects of gold movements are automatic and reciprocal, it follows that the value of gold will tend to be the same in all countries operating on the gold standard. Stability in the trend of the price level in gold standard countries, therefore, depends upon a correct adjustment of the monetary demand for gold on the part of those countries to the quantity of gold available for monetary purposes. But, prior to the Great War, the monetary demand for gold tended to be relatively constant, with the result that the trend of the price level tended to vary with the supply of gold, allowance being made for long-term changes in world productivity.⁴ It will therefore be desirable to appraise the gold standard in respect to its stability, from the point of view both of past performance and future possibilities, assuming the supply of gold to be the determining factor in the attainment of such stability.

The past performance of the gold standard.—Viewed in the light of historical performance, the gold standard does not have a highly exemplary record. Using Mr. Kitchin's figures for the period 1850–1913, the relative stock of gold money,⁵ which follows closely the secular trend of the price level, rose from 100 in 1850 to 139 in 1860–62, thereafter falling to 91 in 1891–96 and thence rising to 101 in 1909–13. These movements correspond to a rise of 39 per

⁴ In this connection see studies by Professor Gustav Cassel and Mr. Joseph Kitchin, *First Interim Report of the Gold Delegation*, Annexes X and XI, League of Nations, Geneva 1930. See also, L. C. Wilcoxon, "World Prices and the Precious Metals," *Journal of the American Statistical Association*, XXVII, 129–140.

⁵ The relative stock of monetary gold represents the ratio of the actual stock to the stock of 1850 increased at the constant rate of 3.1% per annum, this being the rate of increase deemed necessary to offset the long-term increase in productivity and trade during the period. Although many countries were on a bimetallic standard during part or all of the period 1850–1880, the fact that gold was generally overrated at the mints of these countries led, in practice, to the existence of the gold standard in bimetallic countries during those years.

cent, a fall of 35 per cent, and a rise of 11 per cent, respectively, in the three periods noted. These are rather wide changes and do not speak too well for the stability of the gold standard.

The probabilities for the future.—If we continue the assumption that the monetary demand for gold, relatively to the trend of economic productivity, will remain practically constant in the future, the outlook for the stability of the purchasing power of gold hinges largely on the rate of future gold production. There has been a wide difference of opinion on the part of students of the problem as to whether future gold production would prove sufficient to keep pace with the expanding needs of industry, assuming economic productivity to continue its pre-war rate of increase of about 3 per cent per annum. For the most part, at least, up to 1929, the weight of evidence was on the side of an impending gold shortage, the most careful estimates indicating that world gold production would begin to decline between 1932 and 1935, the rate of decline being most rapid between 1940 and 1945, and somewhat slower thereafter.⁶ The result of such a decrease, unless offset by other factors, would be a tendency for the price level to decline over a period of years rather than to remain stable.

The advantages of a "managed currency."—The chief advantage of a managed, irredeemable paper currency would be freedom from dependence on variations in gold production (or the production of some other metal) in maintaining a stable long-term trend of the commodity price level. Assuming an able managing body, it would be possible to adjust the volume of currency to the trend of the country's productivity without reference to the adequacy of the monetary gold supply. A second advantage would be freedom from dependence on the monetary and credit policies of other countries in attempting to prevent extreme cyclical movements of business at home. Under the gold standard, effective operation demands that domestic credit policy be linked with credit policy elsewhere. If country A, for example, permits credit to expand too rapidly and prices to

⁶ See *op. cit.*, *First Interim Report of the Gold Delegation*, Annexes I-IX and XIII, especially Annex VII.

rise, so that gold flows to country *B*, whose prices have not risen, country *B* should properly ease credit and encourage a rise of prices in order to induce the reciprocal action of the loss of gold from *A*, and thus help to stop or reverse the movement of gold. Finally, resort to a managed, irredeemable currency would obviate the substantial investment in gold reserves which adherence to the gold standard involves.

THE CASE FOR THE GOLD STANDARD

Past performance not entirely discreditable.—Turning to the arguments in favor of the gold standard, a further examination of the historical record of that standard shows that its performance in the past has not been as unsatisfactory as would appear at first glance. Referring again to Mr. Kitchin's estimates of relative monetary gold supply, which closely approach the secular trend of the price level, it will be noted that the widest movements of relative monetary gold supply took place in the period 1850 to 1891, when the relative supply of monetary gold first rose 39 per cent and then declined 35 per cent, while from 1891-96 to 1909-13 the increase was but 11 per cent. It was only in the latter period, however, that the bulk of the world's gold was produced on an industrial cost basis. It is only with reference to the latter period, therefore, that the past performance of the gold standard—as indicative of future performance—may properly be judged. If then we confine our attention to the twenty or twenty-five years prior to the outbreak of the Great War, the record of the gold standard, as regards stability of value, although not perfect, is far from discreditable.

The prospective supply of gold.—But past performance alone is not a sufficient basis for judgment. It is also necessary to consider prospective gold production in the years to come. For a number of years prior to the depression, experts on gold production were making gloomy forecasts of an impending scarcity of gold, i.e., an impending decline in the rate of gold production, which would lead, it was feared, to a long downward trend in prices. Decreasing costs of gold production during the depression, coupled with higher money prices for gold as a result of practically universal

currency depreciation, have, however, changed the entire picture. Gold production increased sharply each year after 1929, and in 1936 reached 35,254,000 ounces, as compared with 22,594,000 ounces produced in 1915, the latter being the high record prior to 1932. In fact, "it has been forecast that before long the world's gold production may be at the rate of 40 million ounces per annum, or more than twice as high as in 1929."⁷ Moreover, in view of the widespread devaluation of currencies which has occurred, a given number of ounces of gold comprise a larger number of money units than before the depression.

It is obvious, then, that the large existing and prospective supply of gold constitutes a problem in connection with a possible return to the gold standard. If the gold were allowed to act freely on prices, as under pre-war conditions, a fairly rapidly rising price level extending over a period of years would be in prospect. There are, however, certain means of combating such a tendency. Gold could once more be put into circulation, in the form of gold certificates rather than gold coin if paper money is preferred. Reserve requirements for member banks have already been raised in the United States, and action of a similar nature could be taken by other check-using countries. Central banks could hold larger gold reserves against their liabilities than has been customary in the past. In short, gold could be substituted for credit money to the extent necessary to offset the effects of increased production. If, then, at some future date, gold production should decline, it would be possible, by a reversal of the measures noted, to offset the effects of the lowered production on prices. On the whole, then, it seems reasonable to conclude that a fair degree of stability in the value of gold could be maintained, if desired, for a good many years to come.

The advantages of the gold standard.—The gold standard has certain definite advantages over a managed irredeemable paper currency which make its retention desirable, even at considerable expense and trouble. Its major advantage is that it makes for stability and certainty in international

⁷ Seventh Annual Report of the Bank for International Settlements, reprinted in part in the *Federal Reserve Bulletin*, June 1937, p. 564.

trade. Under a managed currency, exchange rates would fluctuate with fluctuations in prices of international goods and services, tending thus to offset changes in price levels in various countries. This would introduce an element of uncertainty into foreign trade which would prove highly detrimental to its maintenance or extension. External stability would be sacrificed to internal stability, theoretically, but, practically, the disturbance to international trade would probably make internal stability difficult, if not impossible, of accomplishment.

A second argument in favor of the gold standard is its political expediency. An irredeemable paper currency is too easily subject to expansion under political pressure to a point where it is no longer amenable to control. Governments are less prone to abandon the gold standard in order to inflate the currency than they would be to resort to inflation for political purposes under an irredeemable currency. The final restrictive pressure of maintaining gold redemption is also a good check on possible experimental tendencies on the part of central bank managements.

Finally, it should be pointed out that the gold standard, under present conditions, is not incompatible with a large degree of management of the currency. True, its management presents difficulties in the way of international co-operation which are of large magnitude. If each gold standard country, however, is finally able to attain a fair degree of internal stability, the gold standard would provide both external and internal stability alike.⁸ If any country fails to prevent an overexpansion of commercial bank credit, on the other hand, the necessity of maintaining the gold standard will assist in bringing about the readjustment more quickly and surely than would otherwise be the case.

The present outlook.—The desirability of stable international monetary conditions is scarcely open to question, and the foregoing analysis points to the re-establishment of an international gold standard as the most practical solution of the problem. The question does arise, however, as to how

⁸ Some international control of foreign lending by different countries should also be instituted in order to obtain the maximum of both internal and external stability under the gold standard.

and when a return to the gold standard by leading countries can be accomplished.

In this latter connection, it must be admitted that the outlook for any such action in the near future is very dark. When the tripartite monetary agreement was announced in the fall of 1936, it was felt that a beginning had been made toward international monetary stabilization on a gold basis. No immediate action toward complete stabilization was taken in the next few years which was probably wise, for a more or less extended test period to try out exchange relationships was desirable. However, before such a period had elapsed, Europe was plunged into war, and any thought of international monetary stabilization had to be abandoned.

Following the outbreak of the war, a fair degree of stability in exchange rates was attained in major countries by means of exchange control, but this is an artificial expedient which can not be advocated as a permanent arrangement. Possible relaxation of exchange restrictions following the termination of the war may well lead to chaotic conditions in foreign exchange markets and a high degree of instability in international monetary conditions. Such instability might be offset to some extent by the use of stabilization funds, but, in any event, a lengthy period of readjustment following the cessation of hostilities would seem to be inevitable before any serious thought of a return to the international gold standard would be either considered or desirable.

In view of the present unfortunate outlook, the best course would appear to be to have the United States return to a full gold standard and then stand ready to give assistance and encouragement to a return to gold by foreign countries when the time appears to be ripe.

There has been doubt in some quarters as to the ability of leading countries ever to return to a gold standard because of the enormous concentration of gold stocks in the United States. It should be remembered, however, that gold shipments under the normal operation of the gold standard are small and comparatively small gold reserves would suffice to meet such demands. What must be guarded against is large flights of capital from center to center such as occurred in the late 'twenties and early 'thirties. These are the causes

of huge gold movements, and, unless they can be prevented, a return to the international gold standard is not feasible.

Undoubtedly, the international gold standard, if re-established at some time in the future, would require a greater degree of management than it did prior to the first Great War. The fundamental principles of the standard must be the same, however, if it is to operate in satisfactory fashion. Also, such management as is necessary should be in the hands of the central banks and should proceed along sound lines as noted at an earlier point (p. 586). Only so can the real advantages of the international gold standard be attained.

Conclusion.—The problem of money is essentially the problem of facilitating the exchange of goods and services in such fashion as to maintain a satisfactory degree of stability in the purchasing power of the monetary unit. The problem is both domestic and international. Domestically, its solution lies in the attainment of effective credit control ; internationally, it lies in the effective operation of the gold standard under international co-operation. The gold standard will not function successfully, however, so long as international trade is impeded by the erection of tariff barriers and other obstacles to the reciprocal exchange of goods. The real choice does not rest between the gold standard and a managed irredeemable paper currency. It rests rather between freedom of international trade with its attendant advantages and a narrow policy of economic isolation accompanied by a lower standard of living. If the former course is chosen, the gold standard will prove to be the most satisfactory monetary arrangement. Given a gold standard operating under such conditions, an efficient central banking mechanism, and a strict observance of sound commercial banking principles, and the widely discussed problem of money will provide its own solution.

REFERENCES

- Brown, W. A. *The International Gold Standard Reinterpreted*, 1914-1934, Vols. I and II. New York. 1940.
Cassel, G. *The Downfall of the Gold Standard*. New York. 1936.
Einzig, P. *The Future of Gold*. New York. 1935.

- Graham, F. D. and Whittlesey, C. R. *Golden Avalanche*. Princeton. 1939.
- Gregory, T. E. *The Gold Standard and Its Future*. New York (3d Edition). 1935.
- Hardy, C. O. *Is There Enough Gold?* Washington. 1936.
- Hawtrey, R. G. *The Gold Standard in Theory and Practice*. New York (4th Edition). 1939.
- Warren, G. F. and Pearson, F. A. *Gold and Prices*. New York. 1935.
- First Interim Report of the Gold Delegation*. Geneva. 1930.
- Second Interim Report of the Gold Delegation*. Geneva. 1931.
- Report of the Gold Delegation*. Geneva. 1932.
- Selected Documents*. Geneva (Gold Delegation). 1930.
- Selected Documents on the Distribution of Gold*. Geneva (Gold Delegation). 1931.
- The Future of Monetary Policy*. London. 1935.

PART VI
NON-COMMERCIAL BANKING

CHAPTER XXXVII

TRUST FUNCTIONS

Introduction.—In earlier chapters we have been concerned chiefly with the commercial banking functions of the modern bank. In the chapters which follow, certain functions which are ordinarily performed by banks, but which must be distinguished sharply from commercial banking will be considered. Some of these functions are in the nature of convenience services about which something has been said in a later chapter. Services of this sort are largely superfluous, but where merited are performed with the idea of furnishing information and facilities of a sort which will tend to increase the business capacity of the bank's customers, or to increase the amount of its deposits, so that they are in a sense incidental banking services.

Certain other functions, on the other hand, are carried on with a view to making profits directly and not merely as supplementary to a commercial banking business. These functions consist first, of acting as *trustee* or in a *fiduciary* capacity; second, conducting a *safe deposit* business; third, assisting in the *distribution of investment securities*; and fourth, conducting a *savings bank business*.¹ The present chapter is concerned with the first two of these functions, while the third and fourth will be considered in the two following chapters.

The nature of trust functions.—As the name implies, the performance of trust functions involves the control of property by one person, known as the *trustee*, on behalf of another person, known as the *trustor*. The property may be controlled in the interests of the trustor or some third person. In any event, the one who benefits from the han-

¹ Although the so-called commercial banks do undertake these various functions, they are also performed by separate specialized institutions. We are chiefly concerned with the functions as such, however, rather than the institutions which carry them on.

dling of the property by the trustee is known as the *beneficiary*. To illustrate, suppose a business man turns over a definite amount of property, in the form of bonds, mortgages, etc., to the trust department of a bank, to be handled by that department as it sees fit until the business man's son is ready to go to college, at which time the original property with its accumulations of income is to be liquidated and the funds obtained used to send the son through college. In such an instance, the business man would be the trustor, the department of the bank the trustee, and the son the beneficiary.

Scope of the trust department's business.—It is with services of this sort and a variety of related services, that the trust department has to do. It may act as trustee for an individual or a corporation and the beneficiary may be an individual, an institution, a corporation, or a governmental unit. At times the trust department may act as agent in the performance of certain designated services; at others it may have complete control of the property entrusted to it, acting as trustee in the fullest sense. It is not possible to classify the services of the trust department into mutually exclusive groups, but we shall not depart very far from strict accuracy if we divide the functions of this department into two main classes, *personal trusts* and *corporate trusts*. While certain services may be performed for either a corporation or an individual, it is nevertheless true that the work of the personal division of the trust department is, in the main, of a nature distinct from that of the corporate division.

Personal trusts.—Personal or individual trusts may themselves be subdivided into *court trusts* and *trusts under private agreement*. Court trusts are those which are obtained by appointment of the courts which have jurisdiction in cases requiring the designation of an executor or trustee. The trust department is responsible to the court in such instances and must account to it for the handling of the property or estate. Trusts under private agreement, on the other hand, are made by voluntary agreement between a living person and the trust department.

Court trusts. — Much of the business received by the trust department under the head of court trusts arises out of the provisions of wills and may be termed testamentary trust business. The will of a deceased person ordinarily designates an executor of the estate. The will is submitted to the probate (or equivalent) court by the executor where it is probated, the capacity of the maker and the validity of the will being thus tested. If the will is found satisfactory by the court, the executor is then authorized to execute the terms of the will, distributing the property among the heirs as specified in the will after paying all legal claims and taxes. In earlier days it was common practice for the maker of a will to designate an individual as executor. At present, however, there is a growing tendency to name a trust company or trust department as *executor*, especially when the estate is large or when the provisions of the will make the execution of it a complicated affair.

Many times the maker of a will wants his heirs to obtain the benefit of the income from his estate, but does not wish to entrust to them the actual management of the property. In such instances, the maker of the will is likely to designate a trust company as trustee to manage the estate for the benefit of the heirs after having paid all inheritance taxes and debts and distributed any legacies which do not come under the terms of the trust.

While the trust company ordinarily obtains business of the sort indicated by designation of the maker of the will, it is nevertheless possible for an individual executor to renounce his appointment in favor of a trust company. Similarly, when a man dies intestate (without a will), the first of kin has a legal right to administer the estate, but may renounce this right and designate a trust company to act in the capacity of *administrator*. The trust company then pays the necessary taxes and debts and distributes the remainder of the property according to the law applying to intestates.

There are two other common types of court trust. A trust company may be appointed *guardian* of the estates (sometimes even of the persons) of minors or weak-minded persons, or *committee* of the estates of lunatics. In such cases,

the persons in question are deemed by the court to be legally incompetent to handle their own affairs, so that the appointment of a guardian or committee becomes necessary.

Voluntary or living trusts.—In the nature of the case, court trusts are bound to bulk large in the business of the personal trust division of the typical trust department or trust company. In recent years, however, the voluntary or living trust has become of increasing importance in the affairs of the personal trust division.

Voluntary trusts are formed by private agreement between the individual and the trust company (the trustor and trustee), and hence may be created for any lawful purpose. They may be revocable or irrevocable, the irrevocable type being desirable when the trustor wishes to place a certain portion of his property beyond his control to assure himself and family an income in the event of future reverses in his business. The chief difference between a living and a testamentary trust is that the former comes into operation during the lifetime of the trustor and permits him to pass judgment on the desirability of the trust and the efficiency of the trustee before his death.

Although the beneficiaries of a living trust may be individuals or organizations other than the trustor from the time the agreement goes into effect, it is more usual for the trustor to designate himself as the beneficiary during the remainder of his life, the benefits to pass to others indicated in the agreement or his will at the time of his death.

Agency agreements.—When an arrangement is made by which the trust company manages property for the sole benefit of an individual during his lifetime, the property reverting back to the individual's estate at his death, the form of the agreement is that of an agency, not a formal trusteeship. The trust company, acting as agent, may perform any service for the individual, from the mere clipping of coupons and safe-keeping of securities to the complete management of all or any part of the individual's property. Such services may obviously be of great value to professional men, persons in ill health, or others who for one reason or another are not suited to the task of managing their property, as well as to the business man who wishes to devote his energies to his busi-

ness, in which he is expert, leaving the management of his estate in other — and usually more competent — hands.

The following list of services, quoted from Herrick,² gives an idea of the scope of the trust department's work in the voluntary trust field :

As trustee of specified property to be administered for members of a family, for other dependents or for particular charities.

As trustee of property to be administered for the creator of the trust.

As custodian of securities, involving the safekeeping of the securities, collection and remittance of income and attention to all matters which concern the owner.

In the preparation and filing of income tax returns.

In the management of real estate, involving entire charge.

As agent for the collection and remittance of income.

As agent for the payment of taxes, insurance premiums, etc.

As trustee for the collection of insurance policies after the death of the assured, the investment of proceeds and the distribution of income, • annuities or principal.

As custodian of wills.

That of secretarial service.

As depository for property of any description.

As agent or attorney in fact for any purpose.

As escrow agent.

As assignee or receiver.

Corporate trusts.—The trust company or trust department also serves corporations in a variety of ways. The rapid growth in the importance of the corporate form of business enterprise in the past half century, together with the great increase in trading in corporate securities, has largely increased the corporate trust business of the majority of trust companies. A few of the more important capacities in which the trust company may act in behalf of the corporation will be briefly considered.

Trustee under a corporate mortgage.—A corporation, like an individual, may borrow money on the basis of mortgage security on part or all of the real property of the company. Since the amount to be raised in this fashion is likely to be larger than can be furnished by one party, however, and since the mortgage itself cannot well be divided into numerous parts, the corporation resorts to the sale of bonds, the mortgage against its property being placed with a trust company

² Herrick, C., *Trust Departments in Banks and Trust Companies*, p. 15.

to be held for the protection of the bondholders. Even when the bonds issued are not secured by a specific mortgage on the company's property, a trustee is still necessary to take charge of the indenture or agreement between the company and the bondholders which specifies the rights and duties of the two parties, and, of course, a trust company or trust department is likely to be employed in this capacity. If the agreement provides for a sinking fund for the amortization of the bond issue, the same trust company which acts as trustee will also act in the capacity of depository and agent for the proper handling of the sinking fund.

Transfer agent for stocks.—Another important service performed by the corporate trust division is that of acting as transfer agent for corporations. Every time one or more shares of stock of a given company change hands it is necessary for a record of the transfer to be made in order that the list of the corporation's stockholders may be accurately maintained. With the vast amount of trading that goes on today in the shares of many companies, it is almost essential for these concerns to employ a specialized agency such as a trust company for this purpose. The trust company keeps an accurate record of all changes in ownership in the shares of the corporations for which it is acting, and makes sure that the transferee receives a clear title to the shares he has purchased or obtained. Stock certificates are non-negotiable instruments and can be transferred only by assignment. The old certificate must be surrendered by the transferor, a new one issued to the transferee, and the property entry made in the stock book, before the transfer is binding. Where the number of transfers made daily is large, the work of a transfer agent is clearly considerable.

Registrar of stocks, bonds, or commercial paper.—It is a rule of the New York Stock Exchange that all certificates of stock of corporations the stock of which is listed on that exchange shall be registered for the protection of the shareholders. The chief function of the registrar in this connection is to make certain that the number of shares of stock outstanding as indicated by the registered certificates is never in excess of the number that has been authorized and actually issued. In other words, the registrar acts as a check on the

corporation in its issuance of stock certificates. This being the case, it follows that the function of registrar cannot be performed by the same agency that acts as transfer agent for a corporation. In fact, many corporations maintain their own transfer offices, especially when their stocks are not widely traded in, but even when a trust company is employed as transfer agent by a given corporation, it may not act as registrar of the stock of the same corporation.

The Stock Exchange rule requiring the registration of certificates of stock arose out of certain malpractices of corporation officials in earlier times which resulted in overissues of stock, thus defrauding the *bona fide* shareholders.

The registration of bonds is not always necessary. The ordinary coupon bond is a negotiable instrument, title passing upon delivery from one person to another, so that no registration is required. Some bonds, however, are registered and, at times, coupon bonds may be registered as to principal. In such instances a trust company is likely to be appointed to act as registrar. Occasionally, also, a trust company may be called upon to act in the same capacity with respect to commercial paper, although the bulk of such paper is not registered.

Depository for various purposes.—The trust company or trust department performs a variety of services for corporations by acting as depository or depository and agent in a number of connections. Among the more important of these services is that of *depository and agent under reorganization agreements or for creditors' committees*. If a corporation fails to pay the interest on its bonds or otherwise vitiates its contract with the bondholders, it will probably prove desirable for the bondholders to take over the immediate control of the business until it can be placed in the hands of a reorganization committee. In order to accomplish this, it is necessary for the bondholders to turn over their bonds to a depository in exchange for deposit certificates. Later, when the business has been reorganized, or an adjustment has been made, the depository and agent calls in the certificates in exchange for new securities which have been issued or for a given proportion of the old securities, as the case may be. The steps toward a reorganization or an adjustment may be

instigated by a committee of creditors or bondholders which employs the trust company as depositary, or they may be taken directly by the trust company acting in the capacity of trustee for the bondholders.

Another capacity in which the trust company is frequently called upon to act is that of *depository and agent under escrow agreements*. Webster defines an escrow as "a deed, bond, or other written engagement, delivered to a third person, to be delivered by him to the grantee only upon the performance or fulfillment of some condition." The escrow agent is, of course, the "third person" referred to in the definition. When a trust company acts as escrow agent and depository, the deed, bond, or other engagement is deposited with it and held until the condition specified in the agreement is fulfilled, at which time it is delivered to the proper party. The deposit of the escrow with the trust company places it beyond the control of the grantor, but the grantee does not receive title until he has fulfilled the specified condition.

Other services.—In addition to rendering those services which have just been described, trust companies also act for corporations at times in many or all of the following capacities:³

- As fiscal agent for the payment of coupons, dividends, interest on registered bonds or principal of maturing bonds, etc.
- As depository and agent for the proper handling of sinking funds or other special funds.
- As depository and agent for voting trusts.
- As depository of subscriptions to stock or bond issues.
- As depository of claims in bankrupt estates.
- As manager of underwriting syndicates.
- As liquidating agent.
- As agent for the safekeeping of securities.
- As agent and / or attorney in fact for any purpose.
- As assignee or receiver.
- As investigator for proposed new enterprises or extensions.
- As trustee for foreign corporations.

Overlapping of corporate and personal functions.—From the foregoing description of the work of the personal and corporate divisions of the modern trust department or

³ From a list given by Herrick, *op. cit.*, p. 16.

trust company, it will be observed that the functions of the two divisions are not entirely separate and distinct in every particular. The trust company may act as agent for the safe-keeping of securities, as escrow agent, as assignee or receiver, etc., for both corporations and individuals. For the most part, however, the business of the two divisions is of a sufficiently distinct character to justify the classification which has been employed.

The community trust.—A relatively new development in the trust field is the community trust.⁴ The object of this form of trust is to provide funds, to be handled ordinarily by a trust company, for the promotion of charitable, educational, and research work for the benefit of the community. The idea is ingenious and commendable in that it practically assures donors that funds given or willed to the trust will be efficiently handled and devoted to desirable uses, an assurance that is otherwise very difficult of attainment. The popularity of the idea is attested by the fact that on February 1, 1925, little more than a decade after the establishment of the first trust of this type, fifty-two community trusts had been established in the United States.⁵

The corporate vs. the personal trustee.—There is evidence of the existence of fiduciary relationships from very early times, but it is only comparatively recently that the corporate trustee, in the form of a trust company or the trust department of a bank, has been available to individuals requiring trust services. In fact, even at the present time, resort is had to individual or personal trustees in many instances. The rapid growth of trust departments and trust companies, however, testifies to the fact that a corporate trustee possesses certain advantages over the individual acting in a fiduciary capacity. The more important of these advantages merit brief consideration.

Permanency.—The corporate fiduciary has perpetual life while the individual has not. Not only may an individual trustee die before he has carried out the terms of the trust,

⁴ The first community trust, as the term is now understood, was the Cleveland Foundation, established on January 2, 1914, by the Cleveland Trust Company. See Herrick, *op. cit.*, p. 289, and all of Chapter XIX for a complete discussion of this form of trust.

⁵ *Ibid.*

but he may become incapacitated through accident, old age, ill health, weak-mindedness, etc., thus rendering necessary the appointment of another trustee. The trust company, on the other hand, is able to assure the trustor of the fulfillment of trusts of the longest duration with a continuity of policy which is impossible when one trustee has to be substituted for another before the terms of the trust agreement have been carried out.

Efficiency.—Seldom, if ever, can an individual trustee be found with the experience and ability to make investments of the same combination of safety and yield as those made by the corporate fiduciary. The trust company has a highly skilled staff of investment specialists whose entire time is devoted to the problem of making investments, and it stands to reason that its collective judgment is almost sure to be superior to that of an individual trustee who, in the usual course of events, is not primarily an investment specialist. Furthermore, to perform satisfactorily the functions of a trustee, legal ability of a high order is necessary. Even if an individual trustee could always be found with unquestioned investment ability, it is not at all likely that he would also possess the legal knowledge essential to the best performance of his functions, while the typical trust company is always adequately supplied in this particular. Altogether there can be no question but that, by and large, the corporate fiduciary is far superior to the individual on the score of efficiency and ability in the management of the trustor's property.

Probity and constancy.—The honesty of the trust company can be relied upon. It does not embezzle nor default. If its employees are, in any instance, dishonest, the loss falls on the trust company and not on the property which is held in trust. The law requires that the assets of the estates held in trust be segregated from the assets of the company which makes for greater safety, and, in addition, trust assets are protected to a considerable degree by the capital and surplus of the company.⁶ Further, trust companies are not affected

⁶ Herrick states that the records show but one case in the history of American trust companies of trust funds having been lost because of failure of the trust company. *Op. cit.*, p. 19.

by caprice and personal feeling as the individual trustee may be, and are hence in a position to furnish more satisfactory fiduciary service.

Other advantages.—A number of other advantages pertaining to the corporate trustee may be mentioned. It cannot travel and depart from the vicinity, being always accessible at its office or offices during business hours. It has adequate resources to provide facilities for conducting its business in efficient fashion. Finally, its charges are not high. Not only are the money charges themselves reasonable, but the greater efficiency with which property is handled ordinarily makes the real cost considerably lower than when an individual trustee is employed. Everything considered, there can be little doubt of the superiority of the corporate over the individual trustee in the performance of fiduciary functions.

The development of the corporate trustee.—The inception of the American trust company occurred in April 1822, when the Farmers' Fire Insurance and Loan Company was empowered by the legislature of the State of New York to exercise trust functions.⁷ Other companies were subsequently granted similar powers, but these early companies were chiefly occupied with the business of insurance—a business subsequently taken over by specialized companies—and no really rapid development of the corporate trustee took place until the latter part of the nineteenth and first part of the twentieth century. Indeed, as late as 1875, the Comptroller of the Currency reported but thirty-five such companies, all of which were located in New York and New England. After 1875 their growth was much more rapid, there being over 500 trust companies reported in 1900 with deposits of over one billion dollars.⁸

Since 1900, the development of trust companies and trust departments has been marked. The Annual Report of the Comptroller of the Currency for 1930 contains data on the condition of 1564 loan and trust companies with aggregate resources of over \$17,000,000,000. These figures, which are for state trust companies only, are too low even for the

⁷ *Ibid.*, pp. 2-3.

⁸ *Ibid.*

state institutions, not all of which report to the Comptroller.⁹ In addition to the state institutions, on June 30, 1930, there were 2472 national banks with authority to administer trusts. Of this number, "1829 banks had established trust departments and were administering 79,912 individual trusts with assets aggregating \$4,473,040,926, and in addition were administering 11,511 corporate trusts and acting as trustees for outstanding note and bond issues aggregating \$11,803,717,370."¹⁰ It is clear from these figures that the growth in resources and popularity of the corporate trustee since the beginning of the century has been truly remarkable.

Trust companies and trust departments.—In the preceding pages of the chapter the terms "trust company" and "trust department" have been used more or less interchangeably. As a matter of fact, although there are many so-called trust companies in the United States, there are few if any of them which do not carry on a savings and commercial banking business as well. Thus the fiduciary functions are carried out by the trust department whether the institution has the words "trust company" included in its title or not.

The encroachment of trust companies upon the banking field has been a natural development. The two sets of functions (trust and banking) can be conveniently performed by the same corporation, the ready availability of a banking department being frequently necessary to the most efficient prosecution of a trust business. With the entry of trust companies into the banking field, the banks have sought—and, for the most part, obtained—legislation permitting them to carry on a trust business if deemed desirable. As a result, the typical banking institution of the present day is equipped to act, in some measure at least, in a fiduciary capacity.

SAFE DEPOSIT BUSINESS

Nature of the business.—The safe deposit department of the typical modern bank performs a relatively simple function. In return for the payment of a specified periodic fee, the bank furnishes vault space for the safe keeping of securities, wills, insurance policies, jewelry, or other valuable per-

⁹ *Ibid.*, p. 4.

¹⁰ *Annual Report of the Comptroller of the Currency 1930*; p. 19.

sonal property. The method used is to rent the customer a safe deposit box which can be opened only by the use of two keys, one of which is in his possession and one in the possession of the bank. When the renter wishes to obtain access to his box, therefore, he must be accompanied by an employee of the bank who has the second key, and the bank must use due precaution to see that no one except the renter, or his duly accredited deputy, shall be permitted access to the box. In other words, the renter of a safe deposit box is given as complete protection as is reasonably possible against the loss of such valuable papers or other property as he may see fit to deposit in this fashion.

The facilities offered by the safe deposit department in the rental of boxes are of most use to those who do not employ the trust department as an agent to manage their estates. The trust department attends to the safe keeping of all bonds, mortgages, etc., under its control, and accordingly the need for a safe deposit box is lessened. Nevertheless, even in such cases, it may be desirable to rent a box for the safe keeping of jewels or other valuables which are not included in the property under the management of the trust department.

Distinction between a safe deposit business and deposit banking.—A sharp distinction must be drawn between a safe deposit business and that of deposit banking. Ownership of the valuables—whether money, jewelry, or securities—which are placed in a safe deposit box does not pass to the bank, but remains with the renter of the box. If a box renter deposits, say, ten gold eagles in his safe deposit box on a certain date, and six months later withdraws them, he will withdraw the identical coins which he deposited. During the six months the coins remained in the box where he had placed them. Suppose, on the other hand, that a customer of the bank deposits \$100 in gold coin for credit to his account. The ownership of the \$100 passes to the bank, and it may use the money in its business as it sees fit. True, the bank is liable to the depositor in the amount of \$100 and will have to pay this amount to the latter in case he wishes to withdraw it. The bank's liability, however, is confined to the payment of the *equivalent* of the original

deposit, not of the *identical* funds deposited. The bank's profit from a safe deposit business comes from the rental charged for vault space and protection against loss, while its profits from banking arises out of the use of the funds over which the depositor has given it control.

Since, under a sound monetary system, it is immaterial to a person whether he has one particular unit of money or another, it happens that individuals generally deposit their money, or claims to money, with the banking department as this procedure is both more convenient and more profitable than keeping it in a safe deposit box. This is not true, however, of most other property such as mortgages, insurance policies, jewels, etc., and the safe deposit department performs a useful service in affording adequate protection against the loss of such property.

While reference has been made to the safe deposit department throughout the preceding discussion, the safe deposit business may be carried on at times in conjunction with that of the trust or banking departments. Vault space is essential to the conduct of either a banking or a trust business, and it is a relatively simple matter to utilize a part of this space for a safe deposit business which, while demanding care and accuracy, does not require the services of an expensive staff of specialists.

Other departments.—In addition to the trust and safe deposit departments some banks have established real estate departments, insurance departments, etc. While such divisions of the business may be profitable in some instances, they are so far removed from banking and financial activities that their operation by banks is not to be recommended. Since, in cases where such departments have been established, it has probably been found necessary to employ experts along these lines in connection with the work of the trust department, the organization of separate departments has doubtless been undertaken because services of the type in question were already being performed extensively by the trust division.

Conclusion.—Until recently, the distribution of investment securities was to a considerable extent in the hands of investment departments of banks or investment affiliates. This business of the banks was sharply curtailed by the re-

strictions of the Banking Act of 1933, and is now carried on almost exclusively by specialized institutions. There are indications, however, that some of these functions may be returned to the banks in the near future. In any event, the importance of security distribution remains unchanged, however it may be carried out, and will form the subject matter of the following chapter.

REFERENCES

- Herrick, C. *Trust Departments in Banks and Trust Companies*. New York. 1925.
- Smith, J. G. *The Development of Trust Companies in the United States*. New York. 1928.
- Trust Companies*.

CHAPTER XXXVIII

INVESTMENT BANKING FUNCTIONS

Introduction.—In describing the development of the American banking system in earlier chapters, it was pointed out that prior to the establishment of the Federal Reserve system there existed a fairly clear-cut institutional specialization in the performance of banking and related functions in this country. That is, the national banks were quite largely commercial banking institutions; the state banks and trust companies, while doing some commercial business, were chiefly concerned with the savings and trust fields; and the investment banking business, in a narrow sense, was performed by investment or bond houses organized on a partnership basis. Even at this time some of the national banks operated bond departments, organized often as separate corporations, and affiliations of national banks with state savings and trust companies were rather common in the cities, but a fairly distinct division of banking institutions nevertheless existed throughout the system as a whole.

With the recent development of departmental banking, a marked change has taken place in this respect. The McFadden Act of February 25, 1927, gave the national banks the legal right to operate bond departments under their own charters and broadened their powers, granted under the Federal Reserve Act, to make real estate loans and engage in a savings business. * Many of the national banks have also established trust departments under the provisions of the Federal Reserve Act, as noted in the preceding chapter. The departmental institutions organized under state laws have likewise continued to develop their investment banking functions through the operation of their savings, trust, and bond departments.

In addition to these changes, there occurred, prior to 1933, a marked tendency for the larger departmental banks to enter

the field of investment banking proper through the establishment and operation of affiliated investment companies which perform functions similar to those of the old established partnership houses such as J. P. Morgan & Co., Halsey, Stuart & Co., etc. Thus, from an institutional point of view, the old division of functions was fast disappearing.

The purpose of the present chapter is to describe briefly the investment banking mechanism of the country, to consider the functions performed by the various investment institutions, and to point out the relation between investment institutions and the deposit banks of the country.

The investment house.—Investment banking proper is carried on by what may be termed investment banking houses. The term “investment house” is used broadly to include all of those institutions or departments of institutions which are engaged in handling investment securities directly as merchants—i.e., purchasing them and subsequently selling them to investors. Accordingly, investment affiliates and bond departments of banks and brokerage concerns, as well as the large and small partnership houses of the type already mentioned, are included under this head. Since they all perform the same functions, there is no point in making a distinction between them.

As thus defined, investment houses may be divided roughly into two main classes, wholesale and retail houses. The former group includes a comparatively small number of houses which, although selling directly to investors, are also concerned to a large extent with the purchase of new issues of stocks or bonds from corporations and governmental units, the securities being subsequently marketed both by themselves and by the retail houses. In the organization of the strictly retail house much emphasis is necessarily placed upon the selling end of the business. The sales force is given frequent and careful instruction concerning the details and desirability of each new issue in order that it may be imbued with the knowledge and enthusiasm necessary to the disposal of the securities to investors. In the wholesale house, on the other hand, the purchasing department also looms large in importance and the organization of the business is arranged accordingly.

In addition to the buying and selling departments the organization of the investment house ordinarily includes a statistical department, a trading department, and an accounting department. The statistical department furnishes information based upon its investigations of the security issues handled which is valuable both to the sales force and to the investor. In the wholesale house the work of this department is also of great value to the purchasing department. The trading department has the task of purchasing in the market those securities which have been sold to investors by the sales force, but which the investment house does not have in its portfolio. Many new securities are also disposed of by the selling department in exchange for other securities already in the hands of investors, and it is the function of the trading department to dispose of stocks or bonds thus acquired in the market, if possible, with a profit to the investment house. The accounting department has charge of the handling of, and accounting for, the transactions of the house.

Enough has been said to indicate the fact that the division of investment banking establishments into wholesale and retail houses is not mutually exclusive. The large retail houses occasionally purchase issues of securities or enter into purchasing syndicates with a group of wholesale houses, while practically all of the wholesale houses have more or less extensive selling departments, the investment affiliates of the deposit banks having been especially active in the retail distribution of securities. Nevertheless, in spite of considerable overlapping, the classification is serviceable in indicating the general direction in which the interests of the different investment banking houses lie.

The functions of investment houses.—The functions performed by investment houses may be conveniently grouped under the three heads of *investigation*, *underwriting*, and *distribution*. Generally speaking, the investigation and underwriting of securities issues are undertaken by the wholesale houses while the distribution of the securities to investors is accomplished by both the wholesale and retail establishments.

Investigation.—When a corporation appeals to an investment banking house to purchase a new issue of securities, the

first step taken by the latter, if it is at all interested, is to investigate thoroughly all of the conditions surrounding the issue. If the issue consists of bonds, secured by a mortgage, the property covered by the mortgage must be carefully evaluated by engineers and other experts to make sure that there is a proper margin of protection for the bondholders. Accountants will be employed to see that the corporation's accounts and statements are correct, and the services of an expert lawyer will be required to determine the legal soundness of the issue. In short, everything that can be done will be done to ascertain the desirability of the proposed issue.

The reason for making such a far-reaching and thorough investigation is to protect the credit of the investment house. These institutions depend for their business on the satisfaction of their customers, and the fact that a number of prominent houses protect the market for the issues they finance furnishes an additional incentive to insure the soundness of the issues which they handle.

Underwriting.—After an investment house has satisfied itself of the desirability of a given issue of securities, the next step in the procedure is to underwrite the issue. Underwriting has been defined as “the act or process of guaranteeing the sale of an issue of securities by purchase at a stated price from the issuing corporation or governmentality.”¹ It is then necessary for the underwriter to dispose of the securities at a higher price than that which has been guaranteed if the venture is to prove profitable. Although small issues may occasionally be underwritten by a single banking house, the more usual procedure is to form a syndicate composed of a group of investment bankers, thus permitting a distribution of the risk and a diversification of the securities which any given house has to offer to its customers.

In any specific instance, then, the investment house which has discovered and investigated a given issue and has decided to finance it, will request a few other wholesale houses to join with it in underwriting the issue. Each of these houses will assume the liability to dispose of a given proportion of the issue at an agreed-upon price. Such a joint group of underwriters may be termed a purchasing or *underlying*

¹ Munn, G. G., *Encyclopedia of Banking and Finance*, p. 568.

syndicate. When any profits accruing to the syndicate or any losses suffered by it are apportioned among the members in proportion to their participations, regardless of how many bonds any specific member may have disposed of, the syndicate is called an *unlimited liability account*. This is the usual form of underlying syndicate. If, however, the profits or losses of each member are restricted to his own apportionment of securities, the principle on which the syndicate operates is that of limited liability. Losses may result when the securities have to be sold at less than the anticipated price, or when it is impossible to sell all or part of them at any reasonable price, so that the unsold portion has to be held until the market for it becomes more favorable.

Ordinarily, the originating house (i.e., the house that discovered and investigated the issue) acts as manager of the underlying syndicate, making payment to the issuing corporation or governmental unit, taking charge of the securities, negotiating loans from banks to carry the securities while they are being sold, etc. Sometimes, however, each member of the syndicate makes payment to the issuer directly for its share of the issue, arranges its own loans, and manages its own share of the securities. The latter method is termed *divided carrying*, as contrasted with the former method which is known as *undivided carrying*.

Distribution.—In arranging for the distribution of a security issue, the underlying syndicate forms another syndicate which is variously termed a *selling*, *participating*, or *distributing syndicate*. The membership of this type of syndicate is largely made up of retail houses, trust and savings departments of banks, insurance companies, and other financial institutions. The members agree to take, or assume liability for, a given amount of securities, and the underlying syndicate apportions that part of the issue which its own members do not care to sell in proportion to the amount bid for or on some other designated basis.

Although many of the members of a distributing syndicate are bond houses or bond departments of banks which want the securities to sell to their customers, some of the members—such as trust and savings departments and insurance companies—wish to purchase the bonds for their own accounts.

The underlying syndicate, therefore, turns over the securities to the members of the distributing syndicate at a specified price, but allows a selling commission to those members who wish to sell the securities to individual investors. Thus the bond houses obtain compensation for the cost of selling the securities, while the members that buy for their own accounts obtain the bonds at a price which is below that paid by the individual investor. The underlying syndicate generally profits by this procedure also since it tends to insure a wider and more active reception of the issue than would otherwise occur.

The liability of the members of a distributing syndicate may be either limited or unlimited as in the case of the underlying syndicate. When the number of members is large, however, the limited liability form is apt to be used, although this is not invariably the case. Sometimes, when the market for a particular type of security is active, the distribution of an issue may be most simply accomplished by the organization of a selling group. The members of such a group assume no liability, but merely turn in subscriptions already received from customers to the originating house or syndicate. When the market is less active, on the other hand, the organization of a distributing syndicate is expedient.

Bond departments and investment affiliates.—Having outlined the type of organization and functions of the investment house, let us consider some of the particular questions concerning the operation of bond departments of banks and investment affiliates, since through these instrumentalities the deposit banks participate directly in the investment banking process.

Bond departments.—Many of the larger banks and trust companies in the United States have established bond or investment departments in order to meet more fully the financial needs of their customers. These departments generally correspond rather closely, as regards the nature of their business, to the strictly retail bond house. The National Bank Act, as amended by the Act of February 25, 1927, permits national banks to buy and sell investment securities in the form of bonds, notes and/or debentures of a marketable nature, and state laws generally permit the purchase and sale

to customers of investment securities by banks and/or trust companies.

In conducting a bond department, a bank has this advantage over the independent retail investment house: its own customers are likely to patronize this department in the purchase of investment securities without particular sales stimulation. It is accordingly possible for the bank to obtain business without maintaining an elaborate sales force. By mailing to its customers lists of bonds which the bond department has purchased, with possible recommendations, a response is assured from many customers who have funds to invest and who prefer to deal with their own bank rather than with outsiders. Moreover, since the bank stands to make a profit on the sale of the bonds, there is less tendency for the banker to discourage the withdrawal of deposits for purposes of investment than there would be if the securities were to be purchased from an independent organization.

The possible danger of operating a bond department, on the other hand, is that the banker will recommend to customers the purchase of his own department's securities in preference to some other, and perhaps better, investment which the bond department does not have in its portfolio, or that the bank may buy for its own investment account various bonds which have not proved attractive enough to be salable to customers. The latter possibly is not of great significance when the bond department is operated under the charter of the bank, however, as it makes no great difference whether the bank suffers a loss from its own investments or from the operations of its bond department.

Investment affiliates.—Prior to 1933 the affiliated investment company became increasingly popular as a means by which commercial banks might enter the investment banking field. These investment companies were incorporated enterprises which were under the control of the banks organizing them. Three general types of affiliation were used in practice. First, the bank's shareholders had a *pro rata* interest in the stock of the investment company. This was the type of affiliation which proved most popular. Second, the stock of the affiliated company was owned by the bank.

This type was less usual, probably for the reason that national banks and state banks in various states were not permitted by law to carry an investment of this sort. Third, both the investment company and the bank were controlled by a holding company, or the bank controlled the holding company which, in turn, had control of the affiliate. This type was found usually in connection with group banking.²

In the majority of instances, investment affiliates supplanted bond departments which were already in operation. The reasons which led to the substitution of the affiliate for the bond department³ were: first, the affiliate was not circumscribed by law as was the bond department in respect to the type of securities it might handle; second, in time of need the investment company could borrow from the bank with which it was affiliated; third, the affiliate could establish branch offices without restriction as to number or location; fourth, the separation of the investment from the general banking business through the operation of a separate investment company resulted in more efficient execution of policies than was often the case when the investment business was in the hands of a bond department; fifth, accounting on a strict merchandising basis was possible in an investment company, but not easy to accomplish in a bond department; and, finally, the establishment of an investment research department, which usually accompanied the organization of an affiliate, provided investment counsel for the bank in connection with its own security purchases for investment account.

Without doubt the operation of investment affiliates offered advantages of the sort noted to the banks controlling them. It was contended that their operation also tended to raise the standards of investment banking by introducing the proverbial conservatism of the commercial banker into the investment field and, because their capital was larger than that of most unincorporated investment houses, by

² This information is obtained from a careful study of investment affiliates, Preston, H. H. and Finlay, A. R., "Investment Affiliates Thrive," *American Bankers Association Journal*, May 1930; pp. 1027 ff.

³ As given by Preston, H. H. and Finlay, A. R., "Era Favors Investment Affiliates," *American Bankers Association Journal*, June 1930; pp. 1153 ff.

providing more effective underwriting facilities, carrying a more diversified portfolio, and avoiding "dumping" of securities on the market in large lots.⁴

To offset these advantages there were possible dangers. The affiliate might be inclined to borrow too heavily from its bank in instances when it had accumulated issues of securities which were not readily absorbed. Again, the bank could buy for its own investment account bonds that the affiliate could not market. Moreover, the trust department of the bank might invest trust funds in securities offered for sale by the affiliate, although the obvious danger of such a practice led to a ruling against it on the part of most of the banks operating investment companies. Finally, as in the case of the bond department, there was the danger that the banker's investment advice to his customers would be biased by a desire to aid in the disposal of the particular securities which the affiliate had for sale, even though something else might better suit the needs of the investor.

Because of the dangers and abuses to which the operation of investment affiliates gave rise, drastic action with respect to such institutions was taken by the Banking Act of 1933. The provisions of this law in this regard will be discussed later in the chapter.

Auxiliary institutions. — Two groups of institutions which assist the processes of investment banking are the stock brokerage houses and the various security exchanges. The chief service performed by these factors is the creation of an active market for investment securities. Shares of stock, being evidences of ownership in the issuing corporation, have no maturity date whatever, while bonds are long-dated evidences of indebtedness, usually running for a considerable number of years. Obviously, investment in such instruments will be greatly stimulated if they may be quickly disposed of in the market without undue sacrifice in case of need. The brokers and stock exchanges, therefore, play a highly significant part in the investment banking process through the maintenance of such markets for investment securities.

Brokerage houses. — The typical stock brokerage house is organized on a partnership basis and its chief function is to

⁴ *Ibid.*

buy and sell stocks or bonds for customers on a commission. In order to do this, one or more of the partners must have seats on (i.e., belong to) one, or perhaps several, stock exchanges, and the bulk of the capital furnished by the partners is invested in these stock exchange memberships and in building and equipment. The partners who hold memberships in the stock exchange are known as "floor members" and their chief business is the actual execution of orders received by the firm, while the other partners attend chiefly to the administration of affairs at the firm's office or offices. The larger firms have branch offices at various points throughout the country which are connected by leased wire and telephone systems with the main office, usually in New York.

In addition to the actual execution of orders, the brokers arrange for the purchase of stock on margin and for short sales by their customers. In the purchase of stock on margin the customer furnishes only a part, say 25 per cent,⁵ of the purchase price of the stock. The broker buys the stock, borrowing the other 75 per cent of the purchase price from the bank and putting up the entire amount of stock as security for the loan. If the stock goes down in price, the bank may demand additional collateral and the broker in turn will require additional margin from his customer. If the added margin is not forthcoming, the loan will be called and the security sold to repay the bank. Thus the bank is protected by security with a market value in excess of the loan at all times. This is an example of the "brokers' loan" referred to at length in earlier connections (Chapters XIII and XXI).

When a customer wishes to make a short sale, he puts up a margin of cash with the broker and requests the latter to sell for him so many shares of a given stock. Since the customer does not have the stock to sell, the broker borrows it from some other broker who has this particular stock on hand, sells it in the market, and turns the funds received from the sale over to the lending broker for his use. If the stock goes up in price, an amount of cash equal to the increase in the market value of the stock will have to be turned

⁵ The margin actually required varies with different brokers and with conditions on the stock market, running from as low as 20 to as high as 50 per cent. But see reference to Securities Exchange Act below.

over to the lending broker, and a corresponding added amount of cash will be demanded from the short seller by his broker in order to maintain his margin of protection. If this is not forthcoming, the short seller's broker will buy the stock in the market, return it to the lending broker, and turn back any of the short seller's original cash margin that may be left after deducting his commission. If the price of the stock goes down, on the other hand, the short seller may order his broker to buy back the borrowed stock at the new lower price and close out the transaction. The speculator who has sold short then makes a profit equal to the difference between the original selling price of the stock and the price at which he covered his short sale, less commissions paid to the broker for handling the transaction.

Another important phase of the work of the brokerage house is performed by its statistical department which analyzes the market and publishes the results of its studies in a market letter. These market letters are sent out gratis at regular short intervals to the firm's customers to furnish them with information concerning the probable trend of the market.

The New York Stock Exchange.—The most important securities market in the country is the New York Stock Exchange. The exchange is managed by a board of governors selected from its members. The various officials are selected from the board of governors, and a number of committees, each having charge of a certain phase of the work of the exchange, is also selected from this board. In 1931 the New York Stock Exchange had 1375 members, the members being the only persons allowed on the trading floor of the exchange.

The main trading floor of the exchange is a large room containing twelve stock posts, at each of which a particular group of stock is traded in. The brokers and floor traders (independent members not connected with a brokerage firm) gather around these posts and make bids and offers which result in competitive purchases and sales. Each sale is recorded and a record of it is sent out over the entire country by means of the Stock Exchange ticker system.

Certain brokers on the exchange specialize in trading in

particular securities, others do an odd-lot (less than 100 shares—the trading unit) business by combining small orders, while the floor traders operate independently on their own account. Before a stock can be listed on the exchange, various requirements with respect to publicity, number of shares, number of stockholders, etc., must be met by the issuing corporation, in order to give buyers a knowledge of the issue and to insure a market for it at all times.

In these circumstances, the New York Stock Exchange provides a market for leading stocks which is unexcelled. The chief defect at present seems to be the inability to perfect a ticker system which will report every transaction and still keep abreast of the market on days when the turnover is heavy. Otherwise, the exchange provides a close approach to the theoretically perfect market. One section of the exchange is devoted to the purchase and sale of bonds, so that a market is provided for this type of security as well as for stocks.

The fact that the market for stocks, particularly common stocks, is largely speculative in nature is advantageous in some ways and dangerous in others. Among the advantages, one of the most important is the fact that new, unseasoned securities which are not yet suitable for investment may be carried by speculators during the initial period of their existence until they have become "seasoned," and exhibit greater investment attractions. Presumably, also, the operations of speculators in the market should result in the emergence of the economically correct prices for the various securities traded in. The easy access to the market offered to non-professional speculators, however, at times encourages public participation to an extent that turns this presumptive advantage into a distinct element of danger. The long bull market, culminating in the crash of October 1929, is illustrative of this condition. It is only the operations of highly trained, professional speculators that tend to bring out prices which best represent the real values of the securities dealt in.

In addition to the facilities for trading already enumerated, provision is made for borrowing money at time or on call at what is known as the "money desk." Lenders, chiefly

the banks acting through brokers, and borrowers are here brought together and the rate is fixed for loans to brokers on the basis of the existing supply of and demand for funds. A stock clearing corporation has also been formed which, by canceling, so far as possible, each broker's sales and purchases of a given stock, permits settlement of balances to be made only with an accompanying decrease in the need for bank credit to finance transactions.

Other stock exchanges.—There are numbers of other stock exchanges in operation in the United States which follow more or less closely in detail the organization and procedure of the New York Stock Exchange. They are much smaller and less important than the New York Stock Exchange, however, and need not be described. The Curb Market in New York, which lists somewhat more speculative securities than the big exchange, forms a useful supplement to the activities of the latter.

The over-the-counter market.—Some stocks and bonds are not listed on any organized exchange and are dealt in in what is known as the "over-the-counter" market. That is, they are sold over the counter, or by telephone, by investment and brokerage houses, etc. While the market for such securities may be quite active, it is not so close as the market for listed securities. Most bank and insurance stocks and a fairly large number of bond issues are purchased and sold in this way.

Investing institutions.—Considerable investing is undertaken for individuals by institutions, and, with the increasing number of security issues available for investment, the necessity for expert judgment in the selection of sound investments points to an increasing significance of this type of institution. Savings banks, trust companies, investment trusts, and building and loan associations, are the chief classes of institution coming under this head.

Savings banks.—Both strictly savings banks of the mutual or stock type and the savings departments of deposit banks are large holders of investment securities. By the process of pooling the deposits of their customers, they are enabled to utilize the bulk of the deposited funds for investment purposes. On June 29, 1940, the 551 mutual savings banks in

the United States held investment securities of \$5,261,532,000 in addition to long-term investment loans on real estate security to the amount of \$4,834,663,000. The savings business is not segregated in the reports of the majority of departmental banks, but it is possible to show the extent of their real estate loans and investment holdings. On June 29, 1940, all reporting banks in the United States, excluding mutual savings banks, reported loans on real estate to the amount of \$4,423,205,000 and investments amounting to \$23,813,377,000, in addition to which they were furnishing investment credit in the form of loans secured by stocks and bonds to a figure which, while not accurately determinable, ran well into the billions.

Trust companies.—The description of trust functions in the preceding chapter will have served to show the extent to which trust companies and trust departments in banks act in the capacity of investors for their clients quite apart from the investment activities of their banking departments. In fact, a considerable part of the business of the trust department consists in investing funds left with it in trust, so that institutions of this type enter the investment field as important buyers of mortgages and securities.

Investment trusts.—This institution is relatively new in the American investment field, but has already attained a significant measure of development and promises to become of constantly increasing importance. An investment trust is defined by Willis and Bogen⁶ as “an institution which combines the funds of numerous investors, operating without legal restriction as to the securities it may purchase.” It differs from the savings bank in that it is not restricted by law in making investments and it obtains its funds from the sale of stock, participation certificates, or bonds instead of through the pooling of deposits. It differs also from the holding company in that it buys securities for investment rather than for purposes of control of the companies whose stock is purchased.

In spite of many differences in detail, the institutions grouped under the head of investment trusts may be divided into three groups: the general management trust, the spe-

⁶ *Investment Banking*; p. 89.

cialized management trust, and the fixed trust. In the first type, the management has complete discretionary power to buy and sell securities at any time, thus being in a position to take advantage of changing market conditions. The specialized management trust confines its activities to the purchase and sale of securities of enterprises operating in a particular field, as public utilities, oils, railroads, etc., but within the field chosen the management has discretionary power to shift the securities in its portfolio at will. The fixed trust provides for the purchase of a specified list of securities which is held intact in spite of changing market conditions, the theory being that such a list offers the advantages of diversification and will appreciate in value in the long run.

The investment trust, when properly managed, is a highly serviceable type of institution. American experience with it is comparatively recent and many mistakes have of course been made. With respect to the future, some legislation pertaining to this sort of investing company seems desirable. While it is probably not advisable to limit the types of securities which may be purchased, the law should require these institutions to purchase securities for investment only, thus eliminating a number of companies that are a cross between investment trusts and regular holding companies. Further, it would be wise to require that profits realized from the appreciation of securities should not be paid out in dividends until a substantial reserve for losses had been built up. Finally, it would seem desirable to require the use of a title which would distinguish such companies from those which are primarily incorporated for purposes of speculation in the stock market.

The rapid growth of the investment trust type of organization in recent years is indicated by the Standard Statistics Company's compilation of new security offerings of all investment trusts which increased steadily from 44.7 millions of dollars in 1924 to 2951 millions in 1929.⁷ Since the termination of the bull market in 1929, there have been few

⁷ This includes railroad and bank holding companies and affiliated banking companies, however, which are not run for investment purposes strictly.

new issues, but with a return of prosperity a further development is to be expected.

Building and loan associations.—Urban real estate investment needs are financed in part by the issuance of real estate bonds secured by the property which is being financed. Such bonds are usually issued only for the financing of large buildings such as apartment hotels, office buildings, etc. In financing urban home building and other smaller projects, the building and loan association has come to play an important rôle. In spite of some differences in organization, the method used by these organizations is generally to sell shares of stock on the installment plan, the funds obtained being used to make loans secured by mortgages for the construction of homes or buildings. The dividends are allowed to accumulate to the credit of the stockholders and repayment is made at a definite future date of the amount of stock which has been subscribed and paid for through the installment payments and accumulated dividends. Some associations make loans only to members or stockholders, while others are not so restricted.

Building and loan associations had over \$8,000,000,000 in urban real estate loans before the depression. They lost ground heavily during the depression and by 1935 had recovered somewhat, reporting loans of some \$4,500,000,000.⁸

Other institutions.—In addition to the institutions discussed, a large investment demand comes from insurance companies, churches, schools, colleges, etc., and, in recent years, from operating industrial companies which have excess funds not needed in their immediate businesses. These institutions differ from the others, however, in that they are not directly engaged in investing for others, except the life insurance companies, which do act in a sense as investment agencies for certain types of policyholders.

Recent legislation pertaining to investment banking.—Chiefly as a result of the depression, and the various banking difficulties which attended it, several laws pertaining to one form or another of investment banking were passed in 1932 and 1933, as either emergency or reform measures. Of

⁸ Willis, H. P. and Bogen, J. I., *Rev. Ed.*, p. 192.

these, the Home Loan Bank Act and the Home Owners' Mortgage Relief Act, The Securities Act, and certain provisions of the Banking Act of 1933 require comment.

The Federal Home Loan Bank Act, July 22, 1932.— This act provided for the establishment of a maximum of twelve mortgage banks, to be known as Federal Home Loan Banks, one in each of a number of districts into which the country was to be divided. Each such bank was to have a capital of at least \$5,000,000, and the Treasury was authorized to subscribe to such stock up to a total of \$125,000,000, the funds to be supplied by the Reconstruction Finance Corporation. Member borrowers are required to subscribe to stock in the Home Loan Banks in certain specified proportions, with a minimum of \$1500. When member borrower subscriptions equal the government subscription, one-half of subsequent member borrower subscriptions are to be used to repay the Treasury, the intent being that the Home Loan Banks shall eventually be owned by borrowing members.

Any building and loan association, savings and loan association, co-operative bank, homestead association, insurance company or savings bank is eligible to become a member borrower, and provision is also made for non-member borrowers under certain conditions. The Federal Home Loan Banks are authorized to make loans to borrowers on the security of home mortgages up to 60 per cent of the unpaid principal of the mortgage, but not in excess of 40 per cent of the value of the real estate, if the mortgage is being amortized. With regard to home mortgages not subject to amortization, the percentages are 50 and 30, respectively. Mortgages must mature within 15 years and be secured by a home property having a value of not over \$20,000. Institutions are not eligible to borrow if the total cost to the home owner is more than 8 per cent.

In order to obtain funds in excess of the capital subscriptions, Federal Home Loan Banks are authorized to issue notes, bonds, or debentures against mortgage as security, bearing a rate not in excess of $5\frac{1}{2}$ per cent when issued within a period of seven years from the passage of the act, and 5 per cent thereafter, such obligations to be tax free.

For purposes of supervision and co-ordination a Federal Home Loan Bank Board of five members is created by the act, this Board to have general regulatory and supervisory powers over the Home Loan Banks.

In the first year, approximately, of operation, the twelve Federal Home Loan Banks authorized about \$26,000,000 in loans, \$15,000,000 of which was advanced. The government paid in about \$70,000,000 on stock subscriptions and member stockholders about \$30,000,000.⁹

The Home Owners' Loan Corporation. — The Home Owners' Loan Act of June 13, 1933, which was designed to supplement the work of the Federal Home Loan Bank system, provided for the organization, by the Federal Home Loan Bank Board, of a Home Owners' Loan Corporation to assist in the refunding at a lower rate of interest of home mortgages for the relief of home owners who were in difficulties as a result of the depression. The Corporation, with a capital of \$200,000,000 subscribed and paid for by the government, was authorized to issue \$2,000,000,000 of 18-year, 4 per cent bonds, interest on the bonds being guaranteed by the government.

Briefly, the procedure involved in the refunding was this : A home owner, whose property is not worth more than \$20,000, and is mortgaged, may refund the mortgage by turning over bonds of the Corporation to the lender in satisfaction of the latter's claim. The home owner may obtain bonds up to \$14,000, or 80 per cent of the value of the property, whichever is smaller, for this purpose as well as for payment in cash of accrued taxes, etc., the entire amount to be refunded into a single mortgage and paid off, including principal and interest, in a period of 15 years. On this new mortgage the home owner will have to pay interest at 5 per cent, and an extension of three years on the principal may be obtained if necessary. Provision was also made for taking up a limited number of outstanding mortgages in cash, but the bulk of the transactions contemplated involves the exchange of the Corporation's bonds for existing mortgages.

⁹ These figures are from an interesting article, "The Future of Government Banking," by John Hanna ; *American Bankers Association Journal*, June 1933, p. 47.

The Home Owners' Loan Act also provided for the establishment of Federal Savings and Loan Associations in localities not now served by similar institutions. The Treasury may subscribe to capital in such associations to the extent of \$100,000 in any single association, this subscription to be paid in proportion to the paying in of money by association members. On December 31, 1940, there were 1441 such associations with loans of \$1,546,270,000.

The Securities Act of 1933. — The Securities Act of 1933, which became law on May 27th, was designed to protect the buyer of securities against fraudulent and misrepresented issues. The essential feature of the law was the requirement that a registration statement shall be filed for every security issued, with certain specified exemptions, it being made unlawful to buy or sell securities, through any means of transportation or communication in interstate commerce, which are not so registered. It was further made unlawful to include in prospectuses, radio sales talks, or other selling devices, any misleading statements, or to omit statements of fact which would cause the information presented to be misleading. This applied to securities exempt from registration as well as to those registered. Registration statements were also required from the sponsors of foreign securities in this country, as well as from domestic issuers. Registration statements for domestic securities required answers to some thirty-two questions, while fourteen questions had to be answered in regard to foreign issues sold in this country. Complete information on all phases of the various issues was thus made available.

The administration of the Securities Act was placed in the hands of the Federal Trade Commission, which was given wide powers for this purpose. It should be noted that the law did not attempt to regulate the quality of the securities issued, but merely to insure the buyer that complete and authentic information regarding any security will be at his disposal. The act also provided for the organization by the President, in his discretion, of a corporation of foreign security holders to represent the interests of holders of defaulted dollar bonds of foreign corporations and governments.

Although the general purpose of this act was entirely commendable, it was so rigorous in certain respects as to deaden investment initiative to a marked degree. It was also doubtful if the administration of the law should have been placed with the Federal Trade Commission.

Provisions of the Banking Act of 1933 relating to investment banking.—Section 20 of the Banking Act of 1933 provided that “after one year from date of enactment of this Act, no member bank shall be affiliated . . . with any corporation, association, business trust, or other similar organization engaged principally in the issue, flotation, underwriting, public sale, or distribution at wholesale or retail or through syndicate participation of stocks, bonds, debentures, notes, or other securities.”

The effect of this section was to require commercial banks to relinquish their investment affiliates by June 16, 1934. Although the operation of investment affiliates by deposit banks had distinct advantages, as noted earlier in the chapter, experience appeared to indicate that the dangers involved outweighed the gains and that the drastic action involved in this section of the Banking Act was accordingly justified.

An attempt was also made to prevent private or independently incorporated investment bankers from engaging in a deposit banking business by providing (Sec. 21) that such institutions shall not receive deposits, subject to check or otherwise, after one year from the date of enactment of the law. Other persons, firms, corporations, associations, business trusts, etc., are also prohibited from receiving deposits unless subjected to state or national supervision.

The Securities Exchange Act of 1934.—The Securities Exchange Act of June 6, 1934, provided for the regulation in the public interest of security exchanges in the United States. A Securities and Exchange Commission of five members, appointed by the President with the advice and consent of the Senate, was created. This commission was designed to execute and administer the terms of the Act which provided for the registration of security markets as well as of the securities dealt in thereon, and regulated the procedure of the exchanges in numerous particulars. The Act also amended the Securities Act of 1933 in certain par-

particulars in order to make it more workable and transferred the administration of the Securities Act to the newly created Securities and Exchange Commission. Both of these changes were much to be desired.

Of interest from the banking point of view, the Securities Exchange Act placed the control of margin requirements in the hands of the Federal Reserve Board, and provided, to begin with, that the amount which the banks might loan was an amount not greater than whichever is higher of —

- (1) 55 per cent of the current market price of the security, or
- (2) 100 per cent of the lowest market price of the security during the preceding thirty-six calendar months, but not more than 75 per cent of the current market price.

The Federal Reserve Board shortly issued a new regulation covering its new powers in this connection. By placing the power to regulate margin requirements with the Federal Reserve Board, the Act gave the Board a large measure of control over the expansion of credit for purposes of stock speculation.

Conclusion. — There can be no doubt that the inflation period, ending with the stock market crash in 1929, gave rise to many evils with regard to the sale and issuance of securities. It is therefore not surprising that steps should have been taken to prevent the recurrence of similar unsatisfactory practices in the future. On the whole, legislation in this direction has been fully justified and has received widespread public approval.

REFERENCES

- Dice, C. A. *The Stock Market*.
Huebner, S. S. *The Stock Market*.
Meeker, J. F. *The Work of the Stock Exchange*.
Willis, H. P. and Bogen, J. I. *Investment Banking*. New York.
(Rev. Ed.) 1936.
Hearings on the Operation of the National and Federal Reserve Banking Systems. S. R. 71.

CHAPTER XXXIX

SAVINGS BANKING

Introduction.—In practically every banking system there are institutions which accept on deposit the small savings of their customers and then lend or invest the bulk of the funds so received. The banking system of the United States contains some of these specialized savings banks, but the bulk of the savings bank business in this country is carried on by the so-called commercial banks, most of which have savings departments. Whether such business is carried on by a specialized institution or by one department of a “department store type” of bank does not affect the fact that savings banking is a specialized type of business, quite distinct in nature from commercial banking. In the present chapter, accordingly, we shall not be especially concerned with the institutions which handle the savings bank business of the country, but rather with the nature of that business. In other words, our approach will be functional rather than institutional.

The savings deposits pool.—In an earlier chapter (Chapter XIV) it was pointed out that the commercial deposits pool consists of the temporary surplus funds of business enterprises which are gathered together by the commercial banks and loaned to business men in need of short-term accommodation. The lenders (depositors) and borrowers were shown to be of the same general class in the community—business enterprises—those who are at one time chiefly borrowers becoming later chiefly lenders.

Savings deposits.—With respect to savings deposits, the situation is quite different. Such deposits represent accumulations, chiefly of individuals, of a fairly permanent nature. A savings account provides the individual with certain very definite advantages. First, it furnishes him with a safe method of keeping those portions of his income which he

desires to set aside to build up a fund for future use either in an emergency or for investment. Second, a savings account is itself a form of investment since interest is paid on such deposits. Third, the banks, through pooling these deposits, are able to invest them in a diversified list of loans and securities, from which each individual depositor receives the benefit. Fourth, a savings account does not depreciate—as securities may at times—and can always be obtained in full if wanted. It is true that the bank is permitted to require a certain notice of withdrawal, but it is also true that this requirement is almost never enforced, the banks very generally paying such deposits upon demand although not by check.

This description of the services performed by the savings bank will serve to indicate the fact that it acts as a medium for the investment of funds which are in the nature of long-

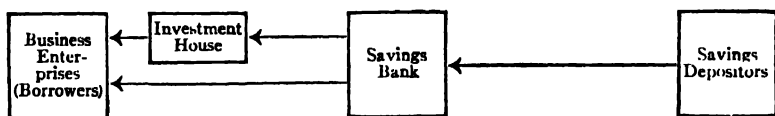


FIG. 20

time surpluses and which are placed with the bank either because the depositor has not acquired a sufficient amount to invest for himself or because he finds the safety and convenience of a savings account better suited to his taste than an individual investment. Such being the case, it is clear that the depositor and borrower are not usually of the same class. This is indicated by the accompanying diagram which brings out the difference in this respect between the commercial and savings deposit pools. Occasionally the savings bank may make real estate loans to its own depositors, but for the most part the depositors and borrowers are two distinct classes, the latter being chiefly business enterprises and governmental units and the former, individual savers.

The investment of savings deposits.—Since savings deposits consist chiefly of long-term investment surpluses which are being accumulated by the depositors, they tend to be relatively stable. The majority of small savers add to their accounts gradually as they are able to do so, with the result that these accounts tend to grow steadily with but few

withdrawals. Of course, when a savings account has reached a certain size, the depositor may withdraw his funds and invest them in stocks or bonds directly, but such withdrawals are infrequent and are usually more than offset by other new deposits. In ordinary times, then, the savings banker has a stable body of funds to lend or invest in as profitable a fashion as is compatible with safety.

Because savings deposits are investment surpluses and are stable in nature, the banker may properly invest them in long-term securities or grant long-term investment loans. The chief form of investment of the savings bank consists of bonds and mortgages, while the loans extended are in large part real estate loans.

Savings bank investments.—In investing savings deposits the banker is concerned, first, with the safety of the investment, and second, with the yield. Unlike the commercial banker, he need give little attention to the marketability or liquidity of his investments. This fact enables the savings banker to invest his funds in bonds or mortgages of a high degree of soundness, but which, because they lack a ready market, yield a substantial rate of return. Many municipal bonds, for example, which are dealt in only on the “over-the-counter” market, would not be satisfactory investments for the demand deposits of the commercial bank because they could not be quickly disposed of without a large sacrifice. Yet, if they are well-protected as regards the payment of interest and the amortization of the principal, they will be thoroughly satisfactory investments from the standpoint of the savings banker.

The case of real estate mortgages is even more in point. Such investments usually have practically no market whatever, it being necessary to await the maturity of the mortgage to receive payment. Obviously, investments of this sort have no place in the portfolio of the commercial bank. The savings banker, on the other hand, may find them eminently satisfactory, since their yield is comparatively high. It is, of course, essential that the banker be fully assured of the mortgagor's ability to pay interest and principal, but he need not be concerned with marketability or liquidity.

To sum up, then, the savings banker may properly invest his deposits in any sound securities with a satisfactory yield without especial concern as to their liquidity. Since he has to pay interest to his depositors, the question of yield is important, for his income must be sufficient to cover his expenses, pay this interest to his depositors, and leave something in the way of profit.

Real estate loans.—Of the direct loans made by savings banks to their customers, the most important class consists of loans on the security of real estate. Formerly, loans of this group were generally of a maturity of from three to five years and were secured by mortgages on the property in question. In recent years, the amortized real estate loan, with a maturity of from ten to twenty years, has come to be the usual type of this form of credit extension. In many ways, the amortized loan is more satisfactory than the straight term loan on real estate in that the principal is reduced regularly by monthly (or other periodic) payments, thus steadily increasing the protection which the mortgage on the property gives the lender.

The proceeds of real estate loans are ordinarily used for urban property development or for long term agricultural investment. Most of the latter are taken care of by specialized institutions such as the Federal Land banks (See Chapter XL), the bulk of the real estate loans of the savings banks and departments of the country being on residential properties.

Loans on the security of real estate are advantageous in that they have a relatively high yield and, when properly granted, are reasonably safe. To lend on real estate profitably and safely, the savings banker must be possessed of caution, expert knowledge, and judgment. The proper valuation of real estate is an extremely difficult problem and one which should be entrusted only to the expert. Furthermore, real property values are likely to fluctuate rather widely with periods of business activity and depression, and from locality to locality. Bank loans on real estate, being largely local, are subject to unusual hazards in this connection.

It is reasonably clear that the heavy mortality among the banks of the United States, in the decade 1921-1930, had as

one of its major causes the overextension of loans on real estate by the banks which succumbed. This is not so much the fault of the real estate loan *per se* as of the improvident extension of this type of credit by the bankers concerned. If the banker is possessed of expert knowledge (or advice) on the subject of valuation, of sufficient caution to be wary of temporary boom conditions in the local real estate market, and of sufficient wisdom to assure himself of the income, or ability to pay, of the borrower, he may safely lend a reasonable proportion of his savings deposits on real estate security. If he does not have these characteristics, he had best leave this type of loan strictly alone.

Other loans.—Although strictly savings banks generally confine their activities to making investments and granting loans on real estate, there is no reason why they should not extend loans to customers on the security of stocks and bonds when the customer desires the loan for investment rather than for speculative purposes. That is, if a customer wishes to borrow from the bank in order to buy securities and will give evidence of his intention of acquiring these securities as an investment by agreeing to reduce his loan periodically out of his income, there is not the slightest objection to such loans from the standpoint of the banker. In extending loans of this sort, the savings banker would be furnishing productive capital to industry, which is his main function in the economic community.

Reserves.—Because of the regularity and slow turnover of real savings deposits, the reserve which it is necessary to maintain against these deposits is comparatively small. The Federal Reserve Act required member banks to maintain reserves equal to but three per cent of their time deposits, a large proportion of which are real savings accounts. There may be some question as to whether or not such a reserve is too small, but, if the savings bank business is soundly conducted, a reserve of five per cent should be adequate to meet all ordinary demands for withdrawals.

Savings institutions in the United States.—Savings banking in the United States is carried on by mutual savings banks, stock savings banks, savings departments of commercial banks and trust companies, and United States postal

savings banks. We shall consider each of these types of institution briefly in the order named.

Mutual savings banks. — Mutual savings banks are institutions without capital stock, managed by trustees, and operated for the mutual benefit of the depositors. These banks have always been operated with great conservatism in the United States and have been eminently successful. In some states, for example New York, the law designates the type of investments which are legal for these banks, thus restricting their investments to fixed interest-bearing securities of the highest quality. While restrictions of this sort are no doubt desirable as a safeguard, it is probably true that the natural conservatism of the management of these institutions would lead to a sound investment policy in the absence of any legal regulations.

It may be concluded that mutual savings banks have performed an extremely valuable service for the communities in which they exist. Unfortunately, although perhaps not unnaturally, banks of this type are largely concentrated in the east, so that the facilities which they offer are not available in all parts of the country. On June 30, 1939, the distribution of mutual savings banks throughout the country was as follows :

New England States	357
Eastern States	179
Middle Western States	12
Pacific States	4
<i>Total</i>	<u>552</u>

Of the 179 mutual savings banks in the eastern states, 134 were in New York. It is accordingly apparent that 491 of these banks, or nearly 89 per cent of the total, were located in seven states. Massachusetts and New York alone had 326 such banks ; roughly 59 per cent of the total for the country.

The following statement of the resources and liabilities of the mutual savings banks of the country on June 29, 1940 will give some indication of the importance of these institutions in the banking system of the United States.

The total resources of these banks on June 29, 1940, amounted to more than 20 per cent of the resources of all of the banks of the country.

Assets and Liabilities of Mutual Savings Banks**June 29, 1940**

(in thousands of dollars)

ASSETS**Loans and discounts (including rediscounts and overdrafts) :**

Commercial and industrial loans	\$ 441
Agricultural loans	153
Open-market paper	4,619
Loans to brokers and dealers in securities	30
Other loans for the purpose of purchasing or carrying stocks, bonds, and other securities	504

Real estate loans :

On farm land	13,288
On residential properties	4,783,724
On other properties	37,651

Loans to banks	86,068
--------------------------	--------

All other loans	14
---------------------------	----

Overdrafts	
----------------------	--

Total loans and discounts	\$ 4,926,492
-------------------------------------	--------------

Investments :

U. S. Government direct obligations	2,596,989
---	-----------

Obligations guaranteed by U. S. Government :

Reconstruction Finance Corporation	108,447
Home Owners' Loan Corporation	253,832
Federal Farm Mortgage Corporation	80,416
Other Government corporations and agencies	73,290

Total U. S. Government obligations, direct and guaran- teed	3,112,974
--	-----------

Obligations of States and political subdivisions	\$ 633,167
--	------------

Other bonds, notes and debentures :**U. S. Government corporations and agencies, not guaran-
teed by United States :**

Federal Land banks	9,154
Federal Intermediate Credit banks	2,636
Other Government corporations and agencies	1,801

Other domestic corporations :

Railroads	713,684
Public utilities	488,605
Industrials	39,830
All others	37,670

Foreign — public and private	54,790
--	--------

Total other bonds, notes, and debentures	\$ 1,348,170
--	--------------

Assets and Liabilities of Mutual Savings Banks—Cont.

Stocks of Federal Reserve banks and other domestic corporations	\$ 167,221
Stocks of foreign corporations . . . . .	.. ..
Total investments	<u>\$ 5,261,532</u>
Currency and coin	74,328
Balances with other banks, including reserve balances and cash items in process of collection	905,051
Bank premises owned, furniture and fixtures	124,496
Real estate owned other than bank premises	571,508
Investments and other assets indirectly representing bank premises or other real estate	9,469
Customers' liability on acceptances outstanding . . . . .	..
Interest, commissions, rent, and other income earned or accrued but not collected	42,041
Other assets (including securities borrowed, insurance and other expenses prepaid, and cash items not in process of collection)	<u>37,301</u>
Total assets	<u><u>\$11,952,218</u></u>

LIABILITIES**Demand deposits :**

Deposits of individuals, partnerships, and corporations	\$ 2,529
Deposits of United States Government	1
Deposits of States and political subdivisions	463
Deposits of banks in the United States	56
Deposits of banks in foreign countries . . . . .	..
Total demand deposits	<u>\$ 3,049</u>

Time deposits (including postal savings) :

Deposits of individuals, partnerships, and corporations :	
Savings deposits	\$10,574,162
Certificates of deposit	370
Deposits accumulated for payment of personal loans	283
Christmas savings and similar accounts	52,259
Open accounts	430
Postal savings deposits . . . . .	..
Deposits of States and political subdivisions	644
Deposits of banks in the United States	141
Deposits of banks in foreign countries . . . . .	..
Total time deposits	<u><u>\$10,628,289</u></u>

Assets and Liabilities of Mutual Savings Banks—Cont.

Other deposits (certified and cashiers' checks (including dividend checks), letters of credit and travelers' checks sold for cash, and amounts due to reserve agents (transit accounts))	\$ 100
Total deposits	\$10,631,438
Bills payable, rediscounts, and other liabilities for borrowed money	3
Acceptances executed by or for account of reporting banks and outstanding	
Interest, discount, rent, and other income collected but not earned	363
Interest, taxes, and other expenses accrued and unpaid	7,283
Other liabilities (including securities borrowed and dividends declared but not payable)	17,059
Total liabilities	\$10,656,146

CAPITAL ACCOUNTS

Capital stock:	
Capital notes and debentures	\$ 7,962
Preferred stock	
Common stock	
Surplus	867,964
Undivided profits	308,674
Reserves and retirement account for preferred stock and capital notes and debentures	111,472
Total capital accounts	\$ 1,296,072
Total liabilities and capital accounts	\$11,952,218

Stock savings banks.—Specialized savings institutions issuing capital stock, and managed by directors elected by the stockholders, are in operation in some parts of the country. Until 1935, separate reports of condition of stock savings banks were published by the Comptroller of the Currency. The fact that these banks are of small importance compared with mutual savings banks and that their business does not differ materially from that of the so-called state commercial banks has led the Comptroller to include this report (since 1936) in the combined report for state commercial banks. The geographical distribution of stock savings banks on June 29, 1935, was as follows:

Eastern States	9
Southern States	2
Middle Western States	309
Western States	2
Pacific States	19
<i>Total</i>	<u>341</u>

Of the 309 such banks in the Middle Western States, 306, or 90 per cent of the total for the country, were located in Iowa. Total assets and liabilities for this class of bank in 1935 amounted to \$919,242,000. They are probably of even less importance today and need no further consideration.

Savings departments of commercial banks.—In most sections of the country, where neither mutual nor stock savings banks have been established, the bulk of the savings deposits are held by the savings departments of commercial banks and trust companies. These banks may be classified into four groups: national banks, trust companies, other state banks, and private banks. The distribution of savings deposits among these groups is shown in the accompanying table.

TABLE XLIII
SAVINGS DEPOSITS AND DEPOSITORS
IN THE UNITED STATES

	<i>Mutual Savings Banks</i>	<i>Other State Banks</i>	<i>Trust Com- panies</i>	<i>Private Banks</i>	<i>National Banks</i>	<i>Total</i>
Savings Deposits, June 30 (\$100,000 omitted)						
1930	9,206	6,804	4,349	24	8,097	28,497
1935	9,872	3,296	2,530	47	6,869	22,614
1940	10,584	4,340	2,911	21	7,894	25,750
Savings Depositors, June 30 (1000 omitted)						
1930	12,077	17,345	7,726	45	15,537	52,729
1935	13,415	8,580	5,026	26	14,269	41,315
1940	14,524	9,396	5,703	30	16,138	45,791
Average Savings De- posit, June 30						
1930	762	392	563	526	521	540
1935	736	384	503	1,852	481	547
1940	729	462	511	711	489	562

Source : *Savings Deposits and Depositors*. New York (American Bankers Association) 1940.

Mutual savings bank deposits and depositors are included for purposes of comparison. It will be observed that, in 1940, banks other than mutual savings banks held about 60 per cent of the savings deposits of the country. The number of savings depositors and the average size savings deposit are also included in the table as matters of general interest.

Postal savings banks.—The United States Postal Savings System is operated in connection with local post offices throughout the country under the supervision of the third assistant postmaster general. Savings will be accepted at designated post offices in amounts from \$1.00 up, but no more than \$100 will be accepted in any one month from a given depositor, and single accounts are limited in size to \$2500. Postal savings deposits still pay interest at the rate of 2 per cent, a higher rate than many banks are paying on savings deposits.

When the system was established in 1910, the problem arose as to how the deposits received by the post offices should be invested. Common practice in other countries having similar systems was to invest deposits in government bonds, but this was precluded in the United States at the time by the lack of available bonds other than those used to secure national bank notes. Moreover, the local banks objected to the removal of the funds from the community. The law solved the problem by providing that the bulk of the postal savings deposits should be deposited in local banks. An amount equal to 5 per cent of the deposits, however, has to be held in lawful money by the Treasury, and some investments in government securities are provided for.

For many years, the chief advantage of the postal savings system was to furnish facilities for saving to immigrants who distrusted the banks. It also permitted the receipt of savings at post offices in communities which were too small to support a bank. On June 29, 1940, postal savings deposits in all active banks totaled \$76,082,000, but actual postal savings were much greater than this as the postal savings system now holds large amounts of investments. Total depositor's balances on this date amounted to \$1,293,000,000.

Notice on time deposits.—One problem that the savings bank management has to face is the question of notice on time

deposits. This problem was brought to the forefront during the depression when withdrawals of savings deposits were at times so heavy as to cause bankers acute embarrassment if not actual failure. The Federal Reserve Act defines time deposits as "all deposits payable after thirty days, all savings accounts and certificates of deposit which are subject to not less than thirty days' notice before payment, and all postal savings deposits." Accordingly, member banks are permitted to require thirty days' notice of withdrawal of savings accounts. State laws likewise usually provide for a thirty-day withdrawal notice, although in some cases the period designated is sixty days.

Although bankers have thus had the right to require notice of withdrawal of savings deposits, they have ordinarily made no pretense of exerting this right in normally prosperous times. Generally speaking, savings depositors could withdraw their funds on demand at any time. During the depression, on the other hand, a good many banks, being hard pressed by heavy withdrawals by depositors, resorted to their legal right to require notice in order to give them time to liquidate some of their assets and acquire the necessary cash.

Unfortunately, when the withdrawal notice requirement was thus put into effect, it merely augmented the fear of the depositors and caused many, who might otherwise not have withdrawn their deposits, to give notice. Requiring notice to them seemed a sign of weakness and made them want to draw out their own deposits.

It is apparent from the experience of the depression that a notice requirement, to be of any service to bankers, must be effective at all times, good and bad. Otherwise, putting the requirement into effect merely heightens the alarm of depositors and fails entirely to give the banker the protection which such requirements are supposed to afford. The Banking Act of 1933 provided that "no member bank shall pay any time deposit before its maturity, or waive any requirement of notice before payment of any savings deposit except as to all savings deposits having the same requirement." This merely prevents the banks from discriminating among depositors, but does not prevent them from waiving requirement of notice to all depositors of a given class. As a matter

of fact, since the settlement of the banking crisis, most of the banks have returned to the old practice of paying savings depositors on demand.

Essential legislation.—In order to strengthen the savings institutions of the United States and to increase their soundness, certain reform legislation is much needed. Three changes suggest themselves as desirable in this connection. They are the enforcement of notice requirements, the restriction of savings bank assets, and the segregation of the assets and business of savings departments in commercial banks and trust companies.

Enforced notice requirements.—The reason for requiring an enforcement of withdrawal notices at all times has been noted above and need not be repeated. It would also be wise to increase the length of the notice period to sixty or even ninety days. This would give the banker ample time to obtain funds to meet demands of depositors, even when withdrawals were substantial, and, with the notice requirement always in effect, there would be no alarm on the part of other depositors because of heavy withdrawals by some.

If it is maintained that this would work hardship on the depositors, it must be remembered that they derive many advantages from their savings deposits and cannot hope to have everything. If they expect to receive interest on their deposits and to be able to obtain cash for them with no depreciation, they should be willing to forego the convenience of withdrawal on demand. If cash were vitally needed at once in any given instance, it would be possible for the depositor to borrow on the security of his savings deposit during the notice period.

The savings banker of necessity must invest a large part of his funds in slow securities or loans to earn the necessary return. It is in his interest and that of the depositor as well that he be protected against large immediate demands for cash which, in the very nature of the case, he cannot meet without embarrassment and loss.

Restriction of assets.—It has been noted that in some states savings banks are restricted by law as to the type and grade of security in which they may invest depositors' funds. Such restrictions should also be included in the Federal Re-

serve Act, as applied to member banks. These institutions held nearly \$12,000,000,000 of time deposits in Dec. 1939, which is a substantial proportion of the savings accounts of the country. It is essential that the depositors owning these accounts be protected by the assurance of a sound investment policy on the part of the banks' managements.

Segregation of assets and business.—Hand in hand with the restriction of investments should go the segregation of the assets, books and business generally of the savings departments of departmental banks. Segregation of this sort is required of the state banks of California and some other states, but is not required of national banks or of state member banks in many states. National banks may invest or lend time deposits and demand deposits indiscriminately in a variety of ways. The analysis of savings banking at the beginning of the chapter indicates that it is a specialized type of business, quite distinct from commercial banking. Although there is no objection to having savings and commercial banking carried on under the same roof for the convenience of depositors, there is very grave objection to mixing the two types of business. If commercial banks are to be permitted to carry on a savings business, that business should be strictly segregated and carried on under an officer who is capable and experienced in savings bank work.

Conclusion.—That savings banks and savings departments, with their many billions of dollars of savings deposits, are important factors in the accumulation of capital goes without saying. They are also socially of vast importance, since they stimulate thrift and add to the solidarity of the great middle class. It is clear, therefore, that their proper operation in the interest of depositors is highly significant. These institutions should be so managed and regulated as to prevent losses to depositors which would discourage saving and cause economic and social injury.

REFERENCES

- Kemmerer, F. W. *Postal Savings* Princeton. 1912.
Kniffin, W. H. *The Savings Bank and Its Practical Work*. New York. 1912.
Savings Deposits and Savings Depositors. New York (American Bankers Association).

CHAPTER XL

AGRICULTURAL CREDIT

Introduction.—The problem of providing credit for agriculture is one that has come to the fore largely since the beginning of the present century. Prior to that time the credit needs of the farmer were cared for chiefly by local banks, merchants, and dealers. The peculiarities of agricultural credit, however, have made necessary the establishment of special types of institutions to care for the needs of the farmer. In order to understand the significance of the machinery which has been provided for this purpose, it will be advisable first to consider the nature of agricultural credit, after which a discussion of existing arrangements will be in order.¹

Characteristics of agricultural credit.—There are a number of characteristics more or less peculiar to agriculture which affect the ability of the farmer to obtain credit on the usual terms. Among the most significant of these are first, the relatively small individual producing unit and, second, the rather close inter-relation of family and business affairs. The fact that the farms of the country are, for the most part, run as small individual proprietorships means that the regular investment market is closed to the farmer. If he is to borrow for fixed capital purposes, he must furnish in the neighborhood of half of the capital himself, being denied the opportunity of selling stock or other securities in the investment market. Moreover, the absence of the corporate form of organization limits the sources of his credit and places him in a poor bargaining position.

The close connection between family and business affairs on the typical farm makes the credit position of the farmer

¹ The following paragraphs on the characteristics of agricultural credit are based mainly on Professor John D. Black's excellent article on this subject in the *Encyclopaedia of the Social Sciences*, Vol. 1, pp. 529-534.

dependent in part on the standard of living of his family, size of family, plans for education of the children, etc., as these factors affect his ability to raise capital. The condition in question also makes it difficult to determine whether loans made to the farmer are for productive or consumptive purposes, since the processes of production and consumption are often closely bound together.

Another factor of importance is the risk involved in agricultural production. Actual production is subject to the hazards of the weather and other natural forces, while the value of farm land is easily affected by speculative factors. The inelastic demand for many agricultural products further complicates the situation, for an exceptionally heavy crop, by forcing prices down to unremunerative levels, may weaken the farmer's credit position as much as a partial or complete crop failure.

Types of agricultural credit.—With these points in mind, attention may be directed to the different types or classes of agricultural credit. In general, these classes are three in number: short-term credit, intermediate credit, and long-term or investment credit. The short-term is represented by loans running from one to six months, intermediate credit by loans of a maturity of from nine months to three years, and long-term investment credit by loans extending over five or more years.

Short-term credit may, of course, be properly extended by the ordinary commercial bank. Agricultural production is characterized, however, by both a high ratio of fixed to working capital and a sluggish turnover of working capital, so that the bulk of the credit needed does not fall into the short-term class. Some types of seed loans, feed loans for livestock to go into feed lots in the fall or into pastures in the spring, some loans on milk crops in market areas, loans on stored produce if amply collateralized, and loans to procure a balanced feeding ration for livestock come under this head. Fertilizer loans and loans to pay wages, on the other hand, may not be entirely self-liquidating in a single season.²

The credit needs commonly placed in the intermediate class are the following: farm buildings, land improvements such as clearing, draining

² *Ibid.*, p. 532.

and liming, fencing, farm machinery, work stock, breeding stock, milk cows, and orchards and small fruit stock. Many of these, such as farm buildings, land drainage and orchard stock, especially, are not liquidating within the accepted period of an intermediate type of loan; and in practise they are often covered by regular real estate mortgages running usually for five years. Farmers frequently expect, however, to be able to repay loans for such purposes within two or three years out of the regular income of the farm, and hence would prefer a shorter instrument than a regular real estate mortgage. Also, many such loans are too small to make a regular real estate mortgage desirable. In many cases the farm already has a mortgage upon it which it may not be possible to enlarge or to supplement with a second mortgage. In practise in the United States farmers are often able to borrow the funds for such purposes at their local banks on notes which they keep on renewing until they are all paid. But this arrangement works badly in a period of credit stringency, such as that following the World War, when a large volume of "frozen credits" is produced. Loans for breeding stock, milk cows, work stock, farm machinery, and small fruit come much nearer to liquidating within the accepted period of intermediate credit.³

The most potent demand for loans for agricultural purposes is that for long-term loans to be used in the purchase of land or for other fixed capital purpose. Investment borrowing of this sort is done on the basis of mortgage security, the loan being repaid either in installments or in a lump sum at maturity. Whichever method of repayment is used, the funds devoted to this purpose must be accumulated out of the profits of the farm over the period for which the credit extends.

Early absence of investment borrowing.—During a large portion of the nineteenth century American farmers did not feel the lack of investment credit facilities as their chief fixed investment—land—was available either gratis or at low cost in many sections of the country. It was thus possible for them to finance the expansion of their operations directly from their own savings, or, in the case of free government land, to obtain the desired acreage by settling on and working it.

As time went on and the population increased, agricultural land naturally became more valuable and it became more difficult for the individual farmer to expand his holdings without resort to borrowing. Most of his short-term and

³ *Ibid.*

intermediate credit needs could be satisfied by resort to local bankers, merchants, cattle loan companies, etc., but long-term loans running more than five years were obtainable in the main only from individuals or insurance companies.

The establishment of special farm loan machinery.—After the turn of the century, the necessity for some sort of special machinery to care for the credit needs of agriculture became increasingly apparent as the years passed. The lack of facilities for serving the farmer in this respect not only handicapped the individual farmer, but endangered the presumably commercial banks as well since the latter acquired non-liquid loans, disguised as short-term loans but indefinitely renewable, in an effort to meet the credit requirements of their agricultural customers.

Belated steps were finally taken to remedy the difficulty. The Federal Farm Loan Act of July 17, 1916, provided for the establishment of Federal land banks and joint stock land banks for the purpose of furnishing investment credit to farmers. This was followed, in 1923, by the Agricultural Credits Act which provided for the establishment of Federal intermediate credit banks, which, as their name indicates, were to care for the intermediate credit needs of agriculture. With the nature and operations of these institutions organized under these laws the remainder of the chapter will be concerned.

FEDERAL LAND BANKS

Organization and nature.—Under the act of July 17, 1916, provision was made for the organization of twelve Federal land banks, one to be located in each of twelve districts into which the country was to be divided. The districts were to be apportioned with due regard to the farm loan needs of the country, but no district was to contain the fractional part of a state. The Federal land banks were to be under the supervision of a Federal Farm Loan Bureau, to be located in the Treasury Department at Washington, and this bureau was placed under the general supervision of a Federal Farm Loan Board of seven members consisting of the Secretary of the Treasury and six members appointed by the President of the United States. Federal land banks have

been established under the terms of the act at Springfield, Baltimore, Columbia, Louisville, New Orleans, St. Louis, St. Paul, Omaha, Wichita, Houston, Berkeley, and Spokane.

Under the original act, the Federal land banks were organized upon the cooperative plan, each bank making loans in its district only through the medium of national farm loan associations, which were local corporations chartered by the Federal Farm Loan Board. Most of the Federal land bank loans are still made through national farm loan associations (now chartered by the Farm Credit Administration), but the law, as amended, permits direct loans to borrowing farmers under certain conditions. Loans are made on the security of first mortgages on farm land and run from five to forty years. The mortgages obtained as security plus the promissory notes of the borrowers are then used by the Federal land banks as collateral to secure their own bonds which are sold in the investment market. Borrowing national farm loan associations, or individual borrowers, must subscribe to capital stock of the Federal land bank of their district in an amount equal to 5 per cent of the sums borrowed. When the loan is made through a national farm loan association, the farmer-members of the association subscribe to an equal amount of stock in the association, thus furnishing the association with the funds to subscribe to stock in the Federal land bank.

The capital of each Federal land bank was originally fixed at a minimum of \$750,000. This amount was subscribed by the Treasury in the first instance, the funds later obtained from stock subscriptions of national farm loan associations being used to repay the Treasury. This original Treasury subscription has all been repaid, but the government has advanced added capital since in substantial amounts. At the end of 1936, the government owned \$125,000,000 of Federal land bank stock, as compared with approximately \$111,000,000 owned by farm loan associations and direct borrowers.

Making a Federal land bank loan.—To illustrate the operation of the system, a typical loan transaction will be considered. Suppose Smith, a farmer, wishes to borrow \$1000 from the Federal land bank of his district. His first

step will be to make application to the secretary-treasurer of the nearest national farm loan association operating in his vicinity. These associations are composed of ten or more individual borrowers and all business with the Federal land bank is conducted through them. Each such association, in addition to a secretary-treasurer, has a president, a vice president, an executive committee of three members, and a board of directors of five members elected from the membership of the association.

Upon receipt of Smith's application, an investigation will be made to insure that the loan desired may be granted by the Federal land bank under the terms of the act. To be eligible the applicant must agree to give as security a first mortgage on his farm land and he must actually be engaged in, or be about to become engaged in, the cultivation of the mortgaged property. The applicant must also state the use or uses to which he intends to put the borrowed funds. Under the law loans may be made: (*a*) to provide for the purchase of land for an agricultural purpose; (*b*) to provide for the purchase of fertilizers, equipment, or livestock; (*c*) to provide for buildings and permanent improvements; and (*d*) to repay indebtedness incurred for any of these purposes prior to January 1, 1922.

If the use which Smith wishes to make of the borrowed fund falls under one or more of these heads, the next step will be to appraise the property in order to make sure that the loan will be properly secured. Under the terms of the Federal Farm Loan Act no loan may be for more than \$25,000 nor less than \$100, and no loan may be made to exceed 50 per cent of the appraised value of the land mortgaged and 20 per cent of the value of permanent, insured improvements thereon. Since the amount of Smith's application falls within the limits fixed by the law, the only question is whether or not the value of the mortgaged property is sufficient to permit the loan.

The appraisal of the property is undertaken by the loan committee or appointed investigator of the national farm loan association. The investigation is exhaustive, including an inquiry into the character and solvency of the applicant as well as a valuation of his property. If a favorable report

is returned by the loan committee or investigator, the loan is recommended to the directors who may then recommend it in turn to the Federal land bank, tendering the endorsement of the local association thereto. In some cases an independent valuation is made by an appraiser by the Federal Farm Loan Board and assigned to the Federal land bank. If both the farm loan association and the board's appraiser recommend the loan, it will without doubt be granted by the Federal land bank, but the bank can lend no more than the amount recommended by the appraiser or the farm loan association, whichever is lower.

Assuming the application to have been granted, Smith must then subscribe to stock in the local farm loan association in the amount of \$50, or 5 per cent of his loan. The association in turn subscribes to stock in the Federal land bank in like amount. The amount of the loan, \$1000, is then turned over to the secretary-treasurer of the association in return for Smith's endorsed note and the mortgage on his property, and is then paid to Smith by this officer.

Repayment of loan.—Loans are made by the Federal land banks on the amortization principle. That is, the borrower makes payment in periodic—usually semi-annual—installments, each installment constituting the payment of interest due and a reduction of principal. Table XLIV illustrates the method of loan repayment on this basis. The method is advantageous to the farmer since it permits him to repay his indebtedness in small semi-annual installments without the necessity of accumulating the principal sum over the entire life of the loan.

Federal land bank bonds.—The funds which the Federal land banks lend to farmers are furnished only in small part by their paid-in capital. For the most part, these funds are obtained from the sale of bonds secured by the mortgages on the property of borrowers plus the borrowers' notes endorsed by the national farm loan associations. Federal land bank bonds are thus secured by a diversified list of mortgages on property which has been appraised at twice the amount of the loan. Moreover, the bonds of each bank are the joint obligations of all of the Federal land banks, which adds to

TABLE XLIV

THE FEDERAL LAND BANK LOAN

How 68 semi-annual installments of \$32.50 and a final payment of \$32.43 will retire a loan of \$1000 bearing 5½ per cent interest.

<i>Payment No.</i>	<i>Interest</i>	<i>Principal</i>	<i>Balance</i>	<i>Payment No.</i>	<i>Interest</i>	<i>Principal</i>	<i>Balance</i>
1	\$27.50	\$5.00	\$995.00	36	\$19.58	\$12.92	\$699.02
2	27.36	5.14	989.86	37	19.22	13.28	685.74
3	27.22	5.28	984.58	38	18.86	13.64	672.10
4	27.08	5.42	979.16	39	18.48	14.02	658.08
5	26.93	5.57	973.59	40	18.10	14.40	643.68
6	26.77	5.73	967.86	41	17.70	14.80	628.88
7	26.62	5.88	961.98	42	17.29	15.21	613.67
8	26.45	6.05	955.93	43	16.88	15.62	598.05
9	26.29	6.21	949.72	44	16.45	16.05	582.00
10	26.12	6.38	943.34	45	16.00	16.50	565.50
11	25.94	6.56	936.78	46	15.55	16.95	548.55
12	25.76	6.74	930.04	47	15.08	17.42	531.13
13	25.58	6.92	923.12	48	14.61	17.89	513.24
14	25.39	7.11	916.01	49	14.11	18.39	494.85
15	25.19	7.31	908.70	50	13.61	18.89	475.96
16	24.99	7.51	901.19	51	13.09	19.41	456.55
17	24.78	7.72	893.47	52	12.55	19.95	436.60
18	24.57	7.93	885.54	53	12.01	20.49	416.12
19	24.35	8.15	877.39	54	11.44	21.06	395.05
20	24.13	8.37	869.02	55	10.86	21.64	373.41
21	23.90	8.60	860.42	56	10.27	22.23	351.18
22	23.66	8.84	851.58	57	9.66	22.84	328.34
23	23.42	9.08	842.50	58	9.03	23.47	304.87
24	23.17	9.33	833.17	59	8.38	24.12	280.75
25	22.91	9.59	823.58	60	7.72	24.78	255.97
26	22.65	9.85	813.73	61	7.04	25.46	230.51
27	22.38	10.12	803.61	62	6.34	26.16	204.35
28	22.10	10.40	793.21	63	5.62	26.88	177.47
29	21.81	10.69	782.52	64	4.88	27.62	149.85
30	21.52	10.98	771.54	65	4.12	28.38	121.47
31	21.22	11.28	760.26	66	3.34	29.16	92.31
32	20.91	11.59	748.67	67	2.54	29.96	62.35
33	20.59	11.91	736.76	68	1.71	30.79	31.56
34	20.26	12.24	724.52	69	.87	31.56	
35	19.92	12.58	711.94				

Source : *The Federal Land Bank Loan*, Circular No. 17. (Federal Farm Land Bureau).

their security. They are also tax-exempt and hence command a good price in the investment market.

Advantages of the system.—The chief advantage of the Federal land banks to the farmer is that they have enabled him to obtain borrowed funds at lower cost than formerly by giving him access to the investment market for high-grade bonds. In view of the desirability of Federal land bank bonds as a safe investment, together with their tax-exemption feature, they can be sold in the market at low rates of interest, and since the Federal land banks are not permitted by law to charge more than 1 per cent above the rate of interest borne by the last preceding issue of bonds, the farmer benefits accordingly. Moreover, since the land banks and farm loan associations are owned by the borrowers, any profits which may be made over and above expenses redound to the advantage of the borrowing farmers.

It is true that the farmer still has to furnish one-half the capital he needs before he can borrow from the Federal land banks. This is, however, no criticism of these institutions, but merely an unfortunate result of the small, individual organization of farming units mentioned in earlier pages of the chapter. Were the Federal land banks to be any more lenient than they now are in granting loans, the rating of their bonds would go down and the advantages of lower cost and a good investment market would be lost to the farmer, to say nothing of the possibility of failure which the land banks would face if they did not assume due precautions in granting loans.

Joint stock land banks.—The Federal Farm Loan Act also provided for the establishment of privately-owned and -operated joint stock land banks of the profit-making type. These institutions were to be under the supervision of the Federal Farm Loan Board and were to operate under federal charters with a minimum subscribed capital of \$250,000, one-half of which had to be paid in before beginning business.

Under these provisions of the act 84 joint stock land banks were chartered. In accordance with the provisions of the Emergency Farm Mortgage Act of 1933, however, which provided for the orderly liquidation of the then existing

joint stock land banks, these banks are now being liquidated. On December 31, 1936, 5 banks were being liquidated by receivers appointed by the Farm Credit Administration, while 42 were being liquidated by their own managements. The banks not in receivership had, by the close of 1939, liquidated about 70 per cent of the assets owned on May 12, 1933, when the Emergency Farm Mortgage Act became law.

Prior to 1933, the joint stock land banks made loans on the security of farm mortgages for the same duration and under the same conditions as those made by the Federal land banks. They also obtained funds by issuing bonds secured by the mortgages in their possession, but these bonds were the liability of the issuing bank only. A double liability was imposed on joint stock land bank stockholders. Like the Federal land banks, the joint stock land banks might not charge interest at a rate more than 1 per cent above the interest rate on the last series of bonds issued. Expenses and profits accordingly had to be covered by this difference. Unlike the Federal land banks, the joint stock land banks could lend directly to individual borrowers.

Although many of the joint stock land banks were soundly operated and worked to the advantage of the farmer, the desirability of having a second set of institutions performing a service identical with that afforded by the Federal land banks was questionable. The provision of the act of May 12, 1933, which required the liquidation of the joint stock land banks was accordingly well founded.

FEDERAL INTERMEDIATE CREDIT BANKS

Organization and functions. — The Agricultural Credits Act of March 4, 1923, provided for the establishment of twelve Federal intermediate credit banks, their location and management to be identical with that of the Federal land banks. Each Federal intermediate credit bank was to have a subscribed capital of \$5,000,000, the entire amount of which was to be subscribed by the United States Government. In 1934, under authority of the Federal Farm Mortgage Corporation Act, the Governor of the Farm Credit Administration paid in \$10,000,000 added capital and \$30,000,000

surplus. This act also gave the Governor of the Farm Credit Administration the right to increase or decrease the capital and paid-in surplus of the individual Federal intermediate credit banks in accordance with the credit needs of the different districts.

Federal intermediate credit banks were originally authorized to make loans to, or to rediscount paper for, cooperative marketing associations, state banks, trust companies savings institutions, national banks, agricultural credit corporations, and incorporated livestock loan companies. Such loans or discounts might have a maturity of from nine months to three years. Thus the banks were to deal with cooperatives and financial institutions, not with individuals directly. Since 1933, the Federal intermediate credit banks have also made loans to, or rediscounted paper for, production credit associations and banks for cooperatives, as explained later in the chapter.

Source of funds.—The intermediate credit banks derive their funds in part from their paid-in capital and surplus and in part from the sale of debentures. These debentures have maturities ranging up to five years and are secured by collateral composed of cash or obligations discounted or purchased or representing loans made under the provisions of the act. Debentures may not be issued in an amount greater than ten times the paid-in capital and surplus of the issuing bank. They are joint obligations of all the intermediate credit banks and are exempt from taxation. Being ordinarily issued with maturities from three to twelve months, they form a highly satisfactory medium-term investment.

Interest charges.—The rate of interest or discount charged by the intermediate credit banks may not exceed by more than 1 per cent the rate borne on the last preceding issue of debentures. Financial institutions rediscounting with these banks may not charge their customers a rate which exceeds the rate charged by the intermediate credit banks by more than 3 per cent.

National agricultural credit corporations.—The act of 1923 also provided for the organization under national charter of privately owned and operated national agricultural credit corporations to deal directly with the public or

with other financial institutions. Few corporations were ever organized under this provision which was of no practical significance.

RECENT DEVELOPMENTS

Agriculture in the depression.—Although certain branches of agriculture had been chronic sufferers from depressed conditions much of the time since 1920, the major business recession, beginning in 1929, enhanced the difficulties of the farmer. Under these circumstances, the powerful political influence of the agricultural interests in Congress was evidenced by the insistence on doing something for the farmer. As a result a number of enactments, some desirable or essential, others not, was placed on the statute books. The majority of these measures contained provisions dealing wholly or in part with the extension of credit to farmers, and it is with those aspects of recent agricultural legislation that we are here concerned.

The Federal Farm Board.—In order to fulfill the Republican Party's promise of agricultural relief, a Federal Farm Board of nine members was created in 1929. A revolving fund of \$500,000,000 was made available to the Board by Congress. The Board had wide lending powers. Loans were authorized (1) to agricultural co-operative associations for both organization and marketing purposes, (2) to insure the maintenance of agricultural prices, and (3) to finance stabilization corporations or other centralized agencies for marketing agricultural products. It seems probable that the Board used these wide powers as wisely as possible in view of the pressure it was under to stabilize prices and prevent losses to the farmers. The whole Farm Board plan was economically unsound, however, and it was practically impossible in the circumstances to grant adequately secured loans. The increasing severity of the depression enhanced the difficulties of the Board in this respect, while the temporary success of the stabilization corporations in steadying the prices of wheat and cotton prevented essential reduction in acreage and aggravated the subsequent price declines in these staples, causing huge losses on loans which, even initially, were inadequately secured. It is stated by

one writer that "the ultimate decline in both wheat and cotton caused losses of about \$360,000,000 to the Board."⁴

Assistance to agricultural credit institutions. — Although many of the agricultural credit institutions described earlier in the chapter were soundly operated, the depression in agriculture became so severe that, by 1932, emergency assistance was necessary. The Reconstruction Finance Corporation Act, aside from allocating \$50,000,000 to the Secretary of Agriculture for direct loans to farmers, placed the facilities of the Corporation at the disposal of various types of agricultural credit institutions. Certain other agricultural loans were provided for in the Emergency Relief and Construction Act, and the Reconstruction Finance Corporation was authorized to invest in the capital of regional agricultural credit corporations, the organization of which was provided for if deemed desirable.

Up to the close of 1932, the Reconstruction Finance Corporation had authorized loans of \$29,000,000 to Federal land banks, of which \$18,500,000 was advanced. Loans to joint stock land banks had been authorized in the amount of \$6,297,000, of which \$2,527,845.62 had been advanced by the end of the year. Authorizations to other types of agricultural credit institutions were in excess of \$20,000,000, a large proportion of which was advanced. The Federal intermediate credit banks, which had not borrowed in 1932, received advances of \$9,250,000 in the first quarter of 1933. In addition to this assistance, the government, in 1932, invested \$125,000,000 in the stock of the Federal land banks.

Unification of agricultural credit agencies. — Since the advent of the Roosevelt Administration on March 4, 1933, a very considerable revision, extension and unification of agricultural credit agencies has been accomplished. Space is here lacking to consider in detail the laws and proclamations under which these changes have been brought about. It will be desirable, however, to give some attention to the organization of agricultural credit facilities as they have been developed under Presidential proclamation and the Farm Credit Acts of 1933 and 1935.

⁴ J. Hanna, "The Future of Government Banking," *American Bankers Association Journal*, June 1933, p. 13.

All farm credit facilities in which the federal government has any interest are now under the direction and supervision of the Farm Credit Administration, created by executive order of the President, effective May 27, 1933. "Prior to the establishment of the Farm Credit Administration the credit facilities available for farmers under the auspices of the Federal Government were administered under various authorities. The Federal land banks and the Federal intermediate credit banks were under the supervision of the Federal Farm Loan Board, a division of the Treasury Department. The Federal Farm Board with its funds to loan to cooperative agencies was an independent governmental agency. The regional agricultural credit corporations were organized under the Reconstruction Finance Corporation Act. The crop production and seed loan offices were administered by the Secretary of Agriculture."⁵ Under the circumstances, some centralized control of these various credit facilities was highly necessary and desirable.

New lending agencies.— In addition to the unification of existing agencies under the Farm Credit Administration, two new types of permanent lending agencies were provided for under the Farm Credit Act of 1933. These were production credit corporations and associations and banks for cooperatives. The functions of these two new kinds of agency may be briefly considered.

Production Credit Corporations.— Production credit corporations are not themselves lending institutions. Their chief functions are to assist in organizing, to supervise, and to maintain the capital of production credit associations, to be considered presently.

By the close of 1936, a production credit corporation, of which there are twelve, had been organized in each Federal land bank district. The capital of the corporations, which was originally \$7,500,000 each, is subscribed by the Governor of the Farm Credit Administration from a revolving fund of \$120,000,000, and the capital of each corporation is subject to change by the Governor in accordance with the needs of the corporations in the different districts. During 1939 the capital of the twelve corporations totaled \$120,000,000,

⁵ *First Annual Report of the Farm Credit Administration, 1933, p. 3.*

ranging from \$8,500,000 in the New Orleans district to \$13,500,000 in the Columbia, South Carolina district.⁶

The production credit corporations have their own officers and employees. The directors of the twelve Federal land banks, however, are ex officio directors of the twelve production credit corporations.

Production credit associations.—These associations are corporations chartered by the Governor of the Farm Credit Administration, their organization and management being prescribed by the Governor in their charters and by-laws and in rules and regulations which he issues. Production credit associations are local cooperative organizations of farmers, stockmen, poultrymen, dairymen and nurserymen who obtain the credit necessary to meet their requirements for current financing from the associations.

An association may be established by 10 or more interested farmers to serve the territory in which they live. By the end of 1933, the number of associations organized was 322, the number increasing to 579 at the end of 1934. On December 31, 1939, there were 528 such associations. This decline from 1934 was the result of the liquidation of associations without a sufficient volume of business or their consolidation with other associations. The Farm Credit Administration reported that, at the close of 1939, every rural county in the United States was served by a production credit association. The area served by one association may be several counties or but part of a county. The average was 4 or 5 counties.

The associations are directed by a board selected by their members from among their number. The farmer-members also select men to serve on an executive committee to pass on loans. Each association also selects a secretary-treasurer, who is the chief officer of the association and is responsible for administering the policies and carrying out the decisions of the board of directors and the executive committee.

The loans made by the associations are for general agricultural purposes and include loans for "planting, cultivation,

⁶ *Seventh Annual Report of the Farm Credit Administration, 1939*, p. 40. Unless otherwise noted, factual information in subsequent paragraphs is taken from this or one of the preceding annual reports.

harvesting and marketing of crops ; the breeding, raising, fattening and marketing of livestock ; the liquidation of indebtedness originally incurred for agricultural purposes ; and for alterations, repairs and improvements to farm buildings." Loans may also be obtained for any purpose incidental to these types of farming operations.

Production credit associations obtain funds for lending partly from their cash loan funds, but in much larger part by rediscounting their paper at the Federal intermediate credit banks. Cash loan funds are obtained by direct borrowing from the Federal intermediate credit banks, the loans being secured by pledged bonds. Offerings of loans already closed by an association which are not accepted for rediscount by the Federal intermediate credit bank are carried direct by the association through its cash loan fund.

Production credit associations in 1939 made 234,266 loans which totaled \$320,961,046. Of the \$152,103,222 of loans outstanding at the end of the year, \$130,402,216, or about 86 per cent, were rediscounted with the Federal intermediate credit banks, while the remaining 11.4 per cent was being carried directly by the associations. Since the associations rediscount such a large proportion of their loans with the Federal intermediate credit banks, it is essential that a very large share of the loans made should meet the credit standards of the latter institutions. The associations are not allowed to rediscount paper with institutions other than the Federal intermediate credit banks.

The rate of interest which production credit associations may charge borrowers is fixed at not more than 3 per cent above the rediscount rate at the Federal intermediate credit bank. The rate at all the latter institutions in the continental United States during 1939 was $1\frac{1}{2}$ per cent, so that borrowers at production credit associations were accommodated at a $4\frac{1}{2}$ per cent rate. As a rule the loans are disbursed to borrowers on a budget plan, the borrower being provided with funds as needed. Since interest is charged only for the time the money is in use, a considerable saving in interest to the borrower may often be effected.

The capital of the production credit associations is not loaned to farmers, but is invested in government obligations

or other approved securities. Capital stock of the associations is of two kinds, Class A, which is non-voting but which has a preferred claim on assets, and Class B, which has voting rights. Class A stock is held largely by the production credit corporations, although available to private investors. Of the \$74,176,776 of Class A stock outstanding on December 31, 1939, all but \$563,916 was held by the production credit corporations.

Class B stock must be subscribed to by borrowers from the production credit associations in an amount in fair book value, not to exceed par, of \$5 for each \$100 or fraction thereof borrowed from the association. Each holder of Class B stock has one vote, regardless of the amount of stock held. When a borrower has liquidated his loan, he may transfer his Class B stock to another borrower or to a person who is eligible to become a borrower, or he may exchange it for Class A stock. If he does not borrow from an association for a period of two consecutive years, he must either transfer or exchange his Class B stock.

The production credit associations were designed to replace on a permanent basis the regional agricultural credit associations organized by the Reconstruction Finance Corporation in 1932. As a result, the regional agricultural credit associations are being liquidated in orderly fashion. By the close of 1939, these institutions no longer had any rediscounts with the Federal intermediate credit banks and had paid all their loans to the R. F. C. They had also returned \$39,500,000 of their original capital to the R. F. C. by that time.

Banks for cooperatives.—The Farm Credit Act of 1933 authorized the establishment of another type of permanent lending agency known as banks for cooperatives. During 1933 and the first part of 1934, thirteen of these banks were organized, one in each of the twelve Federal land bank districts and a Central Bank for Cooperatives, located at Washington. In all but one instance the twelve district banks are located in the same city and building as the other permanent lending organizations.

The purpose of the banks for cooperatives is "to provide credit facilities on a sound business basis for cooperative asso-

ciations in which farmers act together in marketing and processing their farm products and in purchasing, processing and distributing their farm supplies. By the Farm Credit Act of 1935 the banks for cooperatives also were empowered to lend to cooperatives furnishing farm business services." In general, the district banks serve the cooperative agencies located in their respective districts, while the Central Bank for Cooperatives takes care of the credit needs of associations of national or broad regional scope. An operating capital or facility loan greater than 10 per cent of a district bank's capital and surplus, or a commodity loan greater than 20 per cent of such capital and surplus, is referred to the Cooperative Bank Commissioner for action. In some cases he authorizes the district bank to make the loan ; in others it is referred to the Central Bank for Cooperatives for action.

The three classes of loans handled by the banks for cooperatives are commodity loans, operating capital loans and physical facility loans. In general, the commodity loans have the shortest maturity. Operating capital loans have a wide variety of maturities, shorter, however, than those of physical facility loans which run for from 10 to 20 years and are repaid on an amortization basis. Rates charged borrowers vary with the type of loan. During 1939 the rate was $1\frac{1}{2}$ per cent on commodity loans, $2\frac{1}{2}$ per cent on operating capital loans and 4 per cent on physical facility loans. Total advances made by the twelve district banks and the Central Bank for Cooperatives during 1939 amounted to \$83,359,807. Outstanding loans at the end of the year totaled \$76,252,342.

The banks for cooperatives obtain their funds for lending purposes in part from their capital and in part by rediscounting with the Federal intermediate credit banks. The preponderant part of the banks' commodity loans are rediscounted,⁷ but other types of loan are made out of capital. Originally, the Central Bank for Cooperatives was organized with a capital stock of \$50,000,000, while each of the district banks had \$5,000,000 capital stock. The stock was subscribed to and paid for by the Governor of the Farm Credit

⁷ On December 31, 1939, out of outstanding commodity loans of \$20,949,650, \$17,856,063 were so rediscounted.

Administration from the revolving fund created under the Agricultural Marketing Act of 1929. The Governor may increase or decrease the capital of the Central or district banks in accordance with the needs of the various institutions. At the close of 1939, the capital stock of the Central Bank for Cooperatives was \$50,435,400. The subscribed capital stock of the twelve district banks totaled \$102,051,900 on the same date.

Borrowers from the banks for cooperatives are required to subscribe to stock in the lending bank in the amount of \$100 for every \$2000 or fraction thereof in the case of operating capital or facility loans and \$100 per \$10,000 in the case of commodity loans. Where cooperative associations are not permitted by state law to buy stock, they are required to contribute a similar amount to a guaranty fund held by the bank. Total stock and guaranty fund subscriptions at the end of 1939 amounted to \$3,051,900.

In addition to funds obtained from capital stock subscriptions and from rediscounting with the Federal intermediate credit banks, the Central Bank for Cooperatives may issue debentures up to five times its paid-in capital and surplus, and may use the funds obtained from their sale in making loans directly or in lending to or rediscounting for the district banks. Up to the close of 1939, it had not been necessary for the Central Bank to issue debentures to obtain funds for lending.

The directors of each Federal land bank are ex officio directors of the bank for cooperatives of its district and are responsible for its management. The Central Bank for Cooperatives is managed by a board of seven directors, of which the Cooperative Bank Commissioner is chairman. The other six members were originally appointed by the Governor of the Farm Credit Administration with the provision that the successors of the first three so appointed should be chosen from nominees selected by borrowers.

Other lending agencies.—Various other loans of an emergency type are made to farmers, although, with the general improvement in the agricultural situation, the amount of such loans closed is growing smaller. The Emergency Farm Mortgage Act of 1933 made available a fund of

\$200,000,000 to the Land Bank Commissioner to grant loans which could not be provided by existing permanent agencies. Subsequently, the Federal Farm Mortgage Corporation, created by act of January 31, 1934, took over this fund together with loans already made as subscription to its capital. The Federal Farm Mortgage Corporation was also authorized to issue bonds up to \$2,000,000,000, guaranteed as to principal and interest by the United States. These bonds might be exchanged for consolidated farm loan bonds as well as sold to furnish added funds for Land Bank Commissioner loans.

Land Bank Commissioner loans may be made on first or second mortgage security, and new loans may be made until February 1, 1940. At times the Land Bank Commissioner makes first mortgage loans independently of the Federal land banks, but frequently joint loans are made, either on first mortgage security, or the Federal land bank taking a first mortgage and the Land Bank Commissioner a second mortgage on the same property. Of the total land bank and Commissioner loans during 1939, 30.9 per cent were of the latter type. This compares with 14.4 per cent closed by the Federal land banks alone, 18.6 per cent first mortgage loans closed by the Commissioner alone, and 30.9 per cent first mortgage loans closed jointly by the land banks and the Commissioner. Up to the close of 1939, \$994,434,246 Commissioner loans had been closed since May 12, 1933, of which \$27,417,350 were closed in 1939.

The granting of emergency crop and feed loans, both secured and unsecured, is also under the direction of the Farm Credit Administration. Eight of the emergency crop and feed loan offices in 1939 were located in the same cities as the lending agencies. The total of such loans granted in 1939 decreased as compared with 1938—from \$19,647,535 to \$15,191,134. The unsecured loans, extended chiefly to sufferers from the drought, were made on unusually liberal terms and naturally resulted in fairly heavy losses. Seventy-three per cent of 1934–1935 drought relief loans were still outstanding on December 31, 1939.

Agencies in liquidation.—It has already been noted that the joint stock land banks and the regional agricultural

credit corporations were among the agencies which are now being liquidated. The Agricultural Marketing Act Revolving Fund no longer makes new loans, these being cared for by the banks for cooperatives, but at the close of 1939, \$87,-207,043 of loans from this fund to cooperatives were still outstanding and were being serviced.

Farm Credit Administration organization.—The Washington organization of the Farm Credit Administration is shown graphically in Figure 21. At the head of the entire organization is the Governor, who is appointed by the Presi-

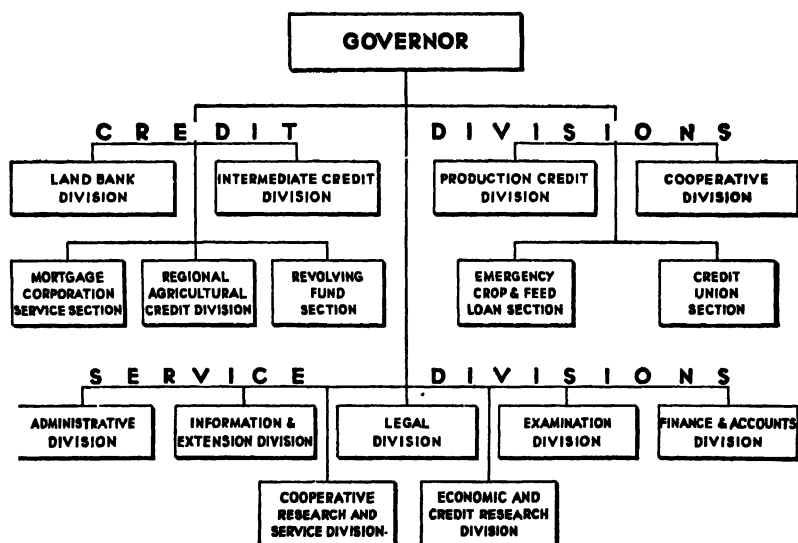


FIG. 21. WASHINGTON ORGANIZATION OF FARM CREDIT ADMINISTRATION

dent with the advice and consent of the Senate. Prior to June 24, 1939, the Governor was responsible directly to the President. Since that date he has been responsible to the Secretary of Agriculture instead. In addition to the Governor, there are two Deputy Governors, the Land Bank Commissioner, the Co-operative Bank Commissioner, the Intermediate Credit Commissioner, the Director of Finance and Accounts, the General Counsel, and the Director of Information and Extension.

The various divisions in the Washington office are in-

licated in Figure 21. Perhaps the four most significant divisions correspond to the four permanent lending agencies. The Land Bank Division, headed by the Land Bank Commissioner, is concerned not only with the operation of the twelve Federal land banks, but also with the granting of Land Bank Commissioner Loans. This division also has supervisory authority over the joint stock land banks. The Production Credit Division, under the supervision of the Production Credit Commissioner, covers the operations of the Production Credit Corporations as well as supervising the emergency crop loan offices. In like manner, the Intermediate Credit Division has charge of the work of the Federal intermediate credit banks and the Cooperative Division supervises the activities of the banks for cooperatives and handles loans made from the Agricultural Marketing Act Revolving Fund. Other divisions of work are indicated in the diagram.

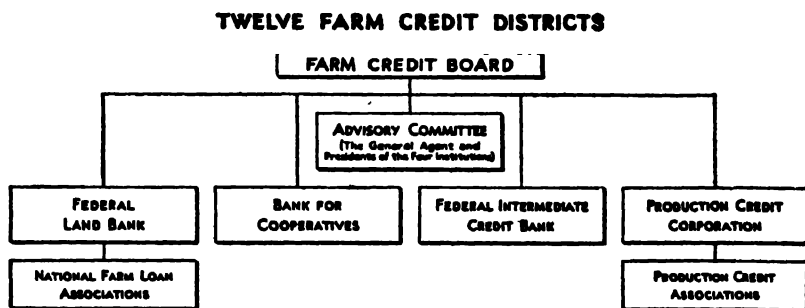


FIG. 22. DISTRICT ORGANIZATION OF FARM CREDIT ADMINISTRATION

Figure 22 shows the organization of the Farm Credit Administration in the twelve farm credit districts. It is to be noted that one Board of Directors, known as the Farm Credit Board, is responsible for the management of the Federal land bank, the Federal intermediate credit bank, the bank for cooperatives and the production credit corporations of each district. The Board consists of seven members, each serving for a three-year term. Three are local directors, three district directors, and one a director at large. Of the local directors, one is elected by the production credit association, one by the national farm loan associations and borrowers through

agencies, and one by borrowers from the bank for cooperatives. The Governor of the Farm Credit Administration appoints the three district directors—one of whom must be a borrower from the Federal land bank—and the director-at-large.

The Farm Credit Board also acts as an Advisory Council on matters affecting two or more of the lending agencies. Upon nomination of the Governor of the Farm Credit Administration, the Advisory Council names a General Agent, who is a coordinating officer and contact man between the district organization and the Washington office. As shown in Figure 22, the General Agent, together with the presidents of the four credit agencies, constitutes an Advisory Committee.

Extent of accommodation.—The amount of credit extended by the chief lending agencies on December 31, 1936, is shown in the accompanying condensed statements of condition of the Federal land banks, the Federal intermediate credit banks, the banks for cooperatives and the Federal Farm Mortgage Corporation. Since the production credit associations obtain their funds for lending from the intermediate credit banks, statements of condition of these associations and of the production credit corporations are omitted.

Conclusion.—There can be little question regarding the desirability of unifying the administration of Federal agricultural credit agencies under the Farm Credit Administration. In the years since its organization in 1933, the Farm Credit Administration has made notable progress in establishing and developing the permanent agencies under its control and in effecting the orderly liquidation of discarded agencies such as the joint stock land banks and the regional agricultural credit corporations. While it may appear that the number of permanent agencies is somewhat excessive, this is not a matter of vital importance so long as the terms upon which credit is extended are in accordance with sound principles of finance. With the exception of certain emergency loans, made under special conditions and not by the permanent agencies, it would appear that the credit extended by the agencies of the Farm Credit Administration has been on a sound basis.

FEDERAL LAND BANKS

CONSOLIDATED STATEMENT OF CONDITION, DECEMBER 31, 1939

ASSETS		
Mortgage loans:		
Unpaid principal	\$1,904,655.01	1.10
Less matured principal unpaid (included in delinquent installments)	8,441,756.04	\$1,896,213,257.16
Purchase money mortgages, contracts, etc.:		
Purchase money first mortgages	40,541,384.12	
Purchase money second mortgages	2,032,054.39	
Real estate sales contracts and notes receivable	54,832,215.53	
Total (unpaid principal)	97,405,674.04	
Less matured principal unpaid (included in delinquent installments)	2,380,603.74	95,015,980.30
Unmatured extensions		4,999,409.00
Delinquent installments, advances, etc.:		
Mortgage loans	36,876,439.15	
Purchase money mortgages, contracts, etc.	5,600,124.64	40,476,863.79
Accrued interest receivable on mortgage loans (not due)		27,374,427.24
Total	2,064,070,937.49	
Less reserve	20,652,601.55	\$2,043,427,335.94
Cash—General funds		37,183,869.38
Deposits with the Treasurer of the United States:		
Cash deposited for matured or called bonds	2,170,575.00	
Cash deposited for matured bond interest	760,567.54	
Cash deposited for unmatured consolidated bond interest	10,104,388.00	13,044,530.54
Due from the Secretary of the Treasury:		
Interest reduction	8,238,357.60	
Paid-in surplus	185,849.32	8,424,206.92
Accounts receivable:		
Due from Federal Farm Mortgage Corporation	1,310,472.75	
Other	231,044.45	1,542,417.20
U. S. Government obligations, direct and fully guaranteed (par \$86,661,500)		88,874,173.31
Other bonds and securities		21,417.08
Accrued interest receivable on securities (not due):		
U. S. Government obligations, direct and fully guaranteed	300,556.08	
Other bonds and securities		300,556.08
Real estate owned (investment)	105,207,140.18	
Less reserve	37,871,017.18	67,335,223.00
Sheriffs' certificates, etc. (investment)	26,687,186.38	
Less reserve	7,160,345.94	13,526,840.44
Loans called for foreclosure, judgments, etc. (investment)	19,759,880.37	
Less reserve	6,318,329.13	13,441,551.34
Furniture, fixtures, equipment, etc.	3,118,832.28	
Less reserve	2,046,437.67	1,072,394.61
Bank buildings	5,506,268.33	
Less reserve	801,310.25	4,704,958.08
Deferred expense:		
Unamortized discount on Federal farm loan bonds sold	4,842,537.79	
Other	1,606,962.03	6,449,500.72
Other assets		733,357.77
Total assets		<u>2,300,172,332.41</u>

FEDERAL LAND BANKS

CONSOLIDATED STATEMENT OF CONDITION, DECEMBER 31, 1939—Continued

LIABILITIES

Consolidated Federal farm loan bonds:

Outstanding	\$1,766,127,840.00	
Less on hand	¹ 23,292,900.00	\$1,742,834,940.00

Matured obligations:

Federal farm loan bonds matured or called	2,179,575.00	
Matured interest on Federal farm loan bonds	760,567.54	2,940,142.54

Notes payable		4,556,400.00
---------------	--	--------------

Accrued interest payable (not due):

Federal farm loan bonds	19,064,427.25	
Notes payable	8,127.50	19,072,554.75

Deferred proceeds of loans		596,121.16
Accounts payable		460,076.93
Dividends declared but unpaid		59,708.47
Trust accounts		6,516,576.19

Payments received on unmatured items:

Installments—Mortgage loans	2,353,563.49	
Installments—Purchase money mortgages, contracts, etc.	194,167.73	
Unmatured extensions	69,443.07	2,617,174.29

Taxes and assessments due on bank-owned real estate		1,660,541.27
Other liabilities		2,401,609.94

Deferred income:

Unamortized premium on Federal farm loan bonds sold	192,751.71	
Other	1,105.50	193,857.21

Reserve for title losses		363,328.00
--------------------------	--	------------

Capital stock owned by:

U. S. Government	125,000,000.00	
National farm loan associations	107,786,870.00	
Direct borrowers and others	3,680,005.00	236,475,965.00

Paid-in surplus		187,875,359.89
Legal reserve		56,921,681.62
Reserve for contingencies		10,094,203.85
Earned surplus		5,000,000.00
Undivided profits		9,622,191.60

Total liabilities		<u>2,300,172,332.41</u>
-------------------	--	-------------------------

¹ Of this amount, \$1,800,000 is pledged as collateral to notes payable.

FEDERAL INTERMEDIATE CREDIT BANKS
CONSOLIDATED STATEMENT OF CONDITION, DECEMBER 31, 1939

ASSETS**Loans and discounts:**

Production credit associations	\$147,325,257.75	
Other financing institutions	\$33,354,414.48	
Less reserve	326,004.26	32,827,420.22
Banks for cooperatives	17,011,062.00	
Cooperative associations	1,834,720.32	\$190,898,470.19

Notes receivable	487,883.56	
Less reserve	316,252.80	171,630.76

Cash—General funds		52,032,731.66
Cash held as collateral		674,315.31
U. S. Government obligations, direct and fully guaranteed (at cost or par, whichever is lower)		74,709,536.74
Accounts receivable		7,251.97

Accrued interest receivable:

Loans and discounts:		
Production credit associations	787,001.23	
Other financing institutions	88,345.68	
Less reserve	88,345.68	
Banks for cooperatives and cooperative associations	43,375.07	
Net	918,711.98	

Notes receivable	891.15	
Less reserve	810.12	83.33

U. S. Government obligations, direct and fully guaranteed	106,954.07	1,115,750.33
---	------------	--------------

Automobiles, furniture, fixtures, and equipment	335,782.65	
Less reserve	335,782.65	

Bank building ¹	52,001.42	
Less reserve	52,001.42	

Prepaid and deferred expense		376.20
Other assets	220,404.91	
Less reserve	157,048.25	63,356.66

Total assets		<u>328,763,428.87</u>
--------------	--	-----------------------

LIABILITIES

Unmatured consolidated debentures outstanding	\$207,200,000.00	
Notes payable		
Trust accounts		18,794.20
Accounts payable		7,257.48
Franchise tax payable		685,049.88
Liability for cash collateral		674,315.31
Deferred proceeds, loans and discounts		1,065.77

Accrued interest payable (not due):

Debentures	\$702,772.78	
Other		702,772.78

Interest collected, not earned		90,178.25
Unamortized premium on outstanding debentures		175,512.98
Other liabilities		39,097.39
Capital stock paid in	70,000,000.00	
Surplus paid in	30,000,000.00	
Reserve for contingencies	2,700,000.00	
Surplus earned	16,460,384.83	119,160,384.83

Total liabilities		<u>328,763,428.87</u>
-------------------	--	-----------------------

¹ This represents the investment in banking quarters by the Federal Intermediate Credit Bank of Berkeley.

BANKS FOR COOPERATIVES
STATEMENTS OF CONDITION, DECEMBER 31, 1939

	Consolidated statement, district banks	Central Bank	Consolidated statement in- cluding Central Bank 1
ASSETS			
Loans:			
Commodity.....	\$14,387,806.84	\$0,577,550.69	\$20,949,649.66
Operating capital	26,014,883.02	9,300,027.47	32,326,644.39
Facility	21,236,843.81	2,156,566.56	22,976,048.36
Total	62,739,534.57	21,104,044.72	76,252,342.41
Less participation certificates outstanding:			
Operating capital	3,235,667.00	722,500.00	.. ..
Facility	417,362.01	.. ..	.. ..
Total	3,653,029.01	722,500.00	.. ..
Net loans outstanding	59,086,505.56	20,381,544.72	76,252,342.41
Less reserve	2,370,620.43	1,500,000.00	3,870,620.43
Notes purchased from cooperatives—Guaranteed by Commodity Credit Corporation	\$56,715,885.13	\$18,881,544.72	\$72,381,721.98
Cash:			
General funds	7,702,637.63	.. ..	.. ..
Held as collateral	49,633.15	5,791,436.77	13,494,074.40
U. S. Government obligations, direct and fully guaranteed:			
Par value	50,654,850.00	.. ..	49,633.15
Unamortized premium (net)	1,053,824.63	35,485,000.00	86,139,850.30
Consolidated Federal intermediate credit bank debentures:			
Par value	5,050,000.00	971,348.70	2,825,173.33
Unamortized premium	7,081.91	282.76	88,165,023.33
		1,200,282.76	6,250,000.00
			7,364.67
			6,257,364.67

See footnotes at end of table.

BANKS FOR COOPERATIVES
STATEMENTS OF CONDITION, DECEMBER 31, 1939—Continued

	Consolidated statement, district banks	Central Bank	Consolidated statement in- cluding Central Bank
ASSETS—Continued			
Loans in process of liquidation	\$261,807.00		\$261,807.00
Less reserve	202,031.24		202,031.24
Assets acquired in liquidation of loans			
Less reserve	175,425.30		175,425.30
	81,621.77		81,621.77
Accounts receivable			
Notes receivable, sales contracts, etc.	26,082.18	\$1,973.94	93,803.53
Less reserve	81,774.43		26,948.84
	18,000.00		18,000.00
Accrued interest receivable:			
Loans to cooperative associations	330,041.02	\$79,954.11	619,895.13
Less reserve for delinquent interest on loans	93,875.72	290.10	94,165.82
Net..	446,065.30	79,664.01	535,729.31
Notes purchased from cooperatives—Guaranteed by Comm- ity Credit Corporation			
U. S. Government obligations, direct and fully guaranteed	187,370.91	59,717.84	391,778.54
Consolidated Federal intermediate credit bank debentures	6,737.48	204,407.63	8,951.38
Notes receivable sales contracts, etc.	2,104.45	2,213.90	2,104.45
Less reserve	1,604.14		1,604.14
Net	500.31	346,003.38	986,677.38
Automobiles, furniture, fixtures, and equipment (net)			
Bank building ²	26,004.00	1.00	26,005.00
Prepaid and deferred expense	40,858.26		40,858.26
Other assets	907.78		907.78
	40,659.53	7,757.99	45,333.08
Total assets	122,226,451.59	65,256,112.92	184,262,665.25

BANKS FOR COOPERATIVES

STATEMENTS OF CONDITION, DECEMBER 31, 1939—Continued

	Consolidated statement, district banks	Central Bank	Consolidated statement in- cluding Central Bank
LIABILITIES			
Loans rediscounted with Federal intermediate credit banks			
Liability on rediscounted commodity loans of other banks for co- operatives	\$13,139,068.02	\$4,666,994.88	\$17,856,062.90
Liability for cash collateral		3,215,797.87	
Accounts payable	49,633.15		49,633.15
Trust accounts	10,164.83		9,957.55
Accrued interest payable on loans rediscounted with Federal inter- mediate credit banks	78,436.90		78,436.90
Other liabilities	24,059.23	17,219.32	41,278.75
Capital stock and guaranty fund:	11,603.46	4,336.01	12,855.36
Capital stock:			
U. S. Government	\$99,000,000.00	\$50,000,000.00	\$149,000,000.00
Cooperatives	2,043,800.00	435,400.00	3,379,200.00
Guaranty fund: Cooperatives	108,100.00	50,435,400.00	108,100.00
Surplus earned	6,811,586.00	6,916,454.64	13,728,040.64
Total liabilities	122,226,451.59	65,256,112.92	184,262,665.25

¹ This statement reflects adjustments necessary to eliminate items which are included in both the "Consolidated statement, district banks" and the "Central Bank" statement.

² This represents the investment in banking quarters by the Berkeley Bank for Cooperatives.

NOTE.—Total commitments outstanding, Dec. 31, 1939, amounted to \$44,867,885.67.

FEDERAL FARM MORTGAGE CORPORATION

STATEMENT OF CONDITION, DECEMBER 31, 1939

ASSETS

Mortgage loans:

Unpaid principal:

First mortgage loans	\$251,764,126.15		
Second mortgage loans	439,115,684.93	\$690,879,811.08	

Matured principal unpaid:

First mortgage loans	5,640,249.72		
Second mortgage loans	12,117,412.68	17,757,662.40	\$673,122,148.68

Purchase money mortgages and contracts:

Purchase money first mortgages	2,223,883.29		
Purchase money second mortgages	746,647.28		
Real estate sales contracts	6,509,141.48	9,479,672.05	

Less matured principal unpaid		178,184.75	9,301,487.30
-------------------------------------	--	------------	--------------

Unmatured extensions		1,414,051.53	
Less reserve		1,414,051.53	

Delinquent installments, advances, etc.:

Mortgage loans	36,161,006.28		
Purchase money mortgages and contracts ..	222,005.52	36,383,011.80	
Less reserve		18,447,164.65	17,935,847.15

Cash—General funds:

Deposited—With the Treasurer of the United States		18,894,187.22	
Undeposited receipts—With district disbursing officers ..		41,846.74	18,936,033.96

Deposits with the Treasurer of the United States for matured bond interest and principal Due from the Secretary of the Treasury—Interest reduction			1,647,400.06
Accounts receivable			2,026,142.10

Consolidated Federal farm loan bonds (par)			954,798.23
--	--	--	------------

Consolidated Federal intermediate credit bank debentures (par \$200,000)			761,120,840.00
--	--	--	----------------

Accrued interest receivable (not due):			200,156.64
--	--	--	------------

Mortgage loans	9,032,871.04		
Consolidated Federal farm loan bonds	6,828,820.16		
Consolidated Federal intermediate credit bank debentures ..	1,547.23	16,763,238.43	

Real estate owned:

Not subject to prior liens (investment)		\$12,950,440.22	
Subject to prior liens (investment)	\$13,695,465.36		
Less unmatured prior liens not assumed	6,772,352.28	6,023,113.08	
Total		10,873,553.30	
Less reserve		11,848,547.95	\$8,025,005.35

Sheriffs' certificates, etc.:

Not subject to prior liens (investment)		5,421,334.70	
Subject to prior liens (investment)	8,311,083.02		
Less unmatured prior liens not assumed	4,169,167.60	4,141,916.32	
Total		9,563,251.02	
Less reserve		6,334,240.21	3,229,001.87

Loans called for foreclosure, judgments, etc. (investment)		8,497,318.60	
Less reserve		5,814,775.51	2,682,543.09

Loans in suspense—Prior liens in foreclosure (investment)		5,000,407.28	
Less reserve		5,990,407.28	

Chattels owned (investment)		9,141.27	
Less reserve		9,141.27	

Unamortized discount on bonds sold			285,063.48
Other assets			138,193.53

Total assets			1,516,370,008.81
--------------------	--	--	------------------

FEDERAL FARM MORTGAGE CORPORATION

STATEMENT OF CONDITION, DECEMBER 31, 1939—*Continued*

LIABILITIES

Federal Farm Mortgage Corporation bonds:		
Outstanding	\$1,279,387,900.00	
Less on hand		\$1,279,387,900.00
Matured obligations:		
Federal Farm Mortgage Corporation bonds matured	430,000.00	
Matured interest on Federal Farm Mortgage Corporation bonds	1,217,409.06	1,047,409.06
Accrued interest on Federal Farm Mortgage Corporation bonds (not due)		8,348,955.92
Deferred proceeds of loans		431,080.25
Accounts payable		894,205.32
Matured items on prior liens not assumed		1,144,722.28
Trust accounts		750,388.84
Payments received on unmatured items:		
Installments:		
Mortgage loans	806,946.00	
Purchase money mortgages and contracts	13,479.07	
Unmatured extensions	14,173.25	834,508.32
Other liabilities		845,733.39
Unamortized premium on bonds sold		776,102.58
Reserve for title losses		278,582.65
Capital stock		200,000,000.00
Reserve for losses on mortgage loans		21,035,630.22
Total liabilities		<u>1,516,376,008.81</u>

REFERENCES

- Benner, C. L. *The Federal Intermediate Credit System*. New York. 1926.
- Black, A. G. "The Provision for Agricultural Credit in The United States," *Quarterly Journal of Economics*, Vol. XLIII (1928).
- Wright, I. *Bank Credit and Agriculture*. New York. 1922.
- Annual Reports of the Farm Credit Administration.*
- Annual Reports of the Federal Farm Loan Board.*
- The Federal Land Bank Loan*. Washington (Federal Farm Loan Bureau).
- The Federal Intermediate Credit Banks*. Washington (Federal Farm Loan Bureau).

INDEX

A

- Abrogation of Gold Clause, 75-76
- Acceptable paper, 479-480
- Acceptance
 - bank, 107, 114, 208, 282, 314-326, 387-388, 431-437, 484-485
 - trade, 107, 292-293
- Acceptance credits, 114
- Acceptance market, 281-282, 326-327, 432-437
- Administrator of an estate, 757
- Advances to member banks, 202, 222, 225, 474-476, 482-483
- Agricultural Adjustment Act, 74-75
- Agricultural credit. *See also* Federal land banks, Joint Stock land banks, Federal Intermediate Credit banks, Production credit associations, Production Credit Corporations, Banks for Co-operatives.
 - agencies for, 808-835
 - characteristics of, 805-806
 - early absence of investment borrowing, 807-808
 - types of, 806-807
- Agricultural Credits Act of 1923, 203-204, 475, 814-815
- Aldrich Bill, 189-190
- Aldrich-Vreeland Act, 187-188
- Anderson, B. M., 362
- Andreades, A., 124n
- Ayres, L. P., 676, 681, 686n, 687

B

- Bank credit department, 294
- Bank credit money, 45-47, 544-554
 - effect on prices, 544-548
 - inelastic, 550
 - similarity to check currency, 550-552
- Bank earnings and expenses, 412-428
- Bank examination, 404-411
- Bank failures. *See* Bank suspensions.
- Bank for International Settlements
 - management, 615-616
 - organization, 614-615
 - origin of, 613-614
 - outlook for the future, 626
 - powers and functions, 616-618
 - present status, 621-625
 - progress of, 619-621

- Bank moratoria, 71, 218-220, 222
- Bank notes. *See also* National bank notes, Federal Reserve bank notes, Federal Reserve notes, Bank credit money.
 - elasticity, 253-257
 - free credit issues, 246
 - guaranteed issues, 252
 - of central banks, 369-371, 557-558
 - parity, 242-246
 - regulated issues, 247-250
 - secured issues, 250-252
 - security, 246-252
- Bank of Canada, 369, 607
- Bank of England, 125, 250, 435, 489-490, 551, 558-561, 598, 604-605, 611, 736
- Bank of France, 365, 367, 370, 561-563, 598
- Bank of Italy, 598
- Bank of Japan, 370, 598
- Bank of Massachusetts, 128
- Bank of New York, 128
- Bank of North America, 127-128
- Bank of Norway, 370, 598-599
- Bank of Sweden, 370, 599
- Bank profits, 416-417
 - distribution of, 425-428
- Bank services, 417-419
- Bank statement, 375-404
 - comparative analysis, 390-393
 - Federal Reserve, 393-398
 - of Bank for International Settlements, 623-625
 - types of, 388-390
- Bank suspensions, 136, 218-222, 628-635
- Bankers' acceptances. *See* Acceptance.
- Banking, commercial, 101-116. *See also* Banking development in U. S., Banking legislation, Banking system.
 - definition, 101-102
 - functions, 116-121
 - origin, 121-126
- Banking Act of 1933, 223-232, 651
- Banking Act of 1935, 232-236
- Banking concentration, 656-659
- Banking Crisis of 1933, 70-71
 - difficulties preceding the Crisis, 213-223
- Banking development in U. S.
 - 1781-1836, 127-135

Banking in U. S.—*Continued*

- 1836-1863, 135-146
- 1863-1913, 147-163
- 1913-1932, 180-212
- 1932-1940, 213-237
- Banking legislation, acts of
 - February 25, 1791, 128-129
 - April 10, 1816, 132-133
 - February 25, 1863, 148
 - June 3, 1864, 148-151
 - March 3, 1865, 152
 - December 23, 1913, 190-198
 - March 9, 1933, 220-221
 - June 16, 1933, 224-232
 - August 23, 1935, 233-236
- Banking policy, 697-698
- Banking system
 - Federal Reserve, 190-209
 - in 1930, 209-211
 - National banking, 147-188
 - origin of commercial banking systems, 125-126
- Banks for Co-operatives, 821-823
 - condition statement, 831-833
- Barnett G. E., 157n, 160
- Beneficiary, 756
- Bill of exchange, 102. *See also* Cable transfers.
 - banker's, 311-312
 - classification of, 313
 - clean, 312
 - commercial, 312
 - demand, 312
 - documentary, 312-313
 - D.A., 312-313
 - D.P., 312-313
 - sight, 312
 - time, 312
- Bill market. *See* Acceptance market.
- Bills payable, 110
- Bimetallism. *See* Monetary standards.
- Black, J. D., 805n
- Bland-Allison Act, 61
- Board of Governors of the Federal Reserve System
 - composition, 196, 203, 233
 - powers and functions, 197-198, 224-225, 233
- Bogen, J. I., 214n, 783n, 785n
- Bond department, 775-776
- Bonds, high grade, as bank investments, 447-449, 726-727
 - liquidity and safety, 448-449
 - marketability, 447
 - types, 447-448
- Branch banking, 641-647. *See also* Branches, Group banking.
 - advantages of, 642-643
 - historical development in U.S., 643-644
 - in other countries, 641-642

- resources, 649-650
- since 1930, 650-652
- Branches. *See also* Group banking, Branch banking.
- Federal Reserve banks, 193
- First Bank of the U.S., 129-130
- foreign, 610, 653-655
- home city, 644-645
- National banks, 229
- Second Bank of the U.S., 133-135
- State Banks of Ohio and Indiana, 143-144
- Brassage, 41
- Bratt, E. C., 661n
- Brokerage house, 778-780, 790
- Brokers' loans. *See* Call loans to brokers, Time loans to brokers.
- Building and loan associations, 785
- Burns, A. R., 15n
- Business cycle
 - pre-War
 - definition, 666
 - depression, 667
 - revival, 667-669
 - prosperity, 669-673
 - recession, 673-674
 - post-War, 674-683

C

- Cable transfers, 313-314
- Call loans to brokers
 - desirability as bank investment, 443-444
 - liquidity of, 443
 - nature and use, 442-443
- Securities Exchange Act of 1934 and, 790
- significance of, 445
- Cannan, E., 550n, 551
- Cannon, J. G., 171n
- Capital funds, 115
- Capital requirements. *See* Capital stock of banks.
- Capital stock of banks, 114, 230, 235-236
- Carothers, N., 50n, 51, 55n, 57n, 58, 66n
- Cassel, G., 362, 535n, 574, 744n
- Catterall, R. C. H., 132n, 133n
- Central banking
 - capital and earnings, 365-367
 - co-operation, 609-613
 - functions, 360-364
 - in wartime, 373-374
 - management, 367-369
 - nature of business, 369-373
 - relations with government, 373
 - reserves, 597-608
- Chain banking. *See* Group banking.
- Chapman, J. M., 289n

Check
 cashier's, 104
 certified, 103-104
 personal, 103
 Check currency. *See also* Deposits, Bank credit money.
 and the value of money, 552
 as credit money, 261-262
 elasticity, 270
 in European countries, 259
 in the United States, 259-260
 parity, 269
 security, 269-270
 volume of, 260
 Clearing and collection of checks, 170-179, 265-268, 453-463
 current methods, 460-462
 inter-district, 461-462
 intra-district, 460-461
 Clearing house, 170-172
 Coin, 39
 Coinage, 39-43
 Collection of checks. *See* Clearing and collection of checks.
 Commercial paper
 advantages and drawbacks, 439-442
 organization of the market, 438-439
 origin of, 437-438
 Committee on Bank Reserves, 467
 recommendations of, 467-469
 criticisms of recommendations, 469-470
 renewal of recommendations, 470
 Commodity money, 14-18
 Competition, government, 661-664
 Comptroller of the Currency, 148-149, 151, 196, 406-410
 Conant, C. A., 17n, 121, 124n, 152n
 Consolidation of banks, 656-659
 Co-operatives, Banks for, 821-823
 Cost of living. *See* Price level, Price index numbers.
 Counterfeiting, 43, 138
 Crawford, R. P., 116n
 Credit analysis, 294-304
 Credit control, 197, 224-225. *See also* Credit policy.
 Federal Reserve
 early experience, 692-697
 after 1921, 697-702
 of speculative credit, 702-704
 in 1933, 708
 since 1933, 708-712
 outlook for, 713-716
 future possibilities of
 and the defense program, 731-732
 commercial credit expansion, 727-730
 investment inflation, 722-727
 needed legislative changes, 730-731
 objectives of credit control, 718-719, 721

qualitative vs. quantitative, 725, 730-732
 theory of credit control, 719
 Credit expansion
 commercial, 727-730
 individual bank, 345-354
 investment, 722-727
 system of banks, 346-354
 Credit money. *See* Money.
 Credit policy, 698-701. *See also* Credit control.
 Crime of '73, 60
 Currency. *See* Check currency, Note issues.
 Current ratio, 301-302

D

Davis, A. McF., 138n, 147n
 Demand for money. *See* Money.
 Denomination system, 36-38
 Deposit account and analysis, 419-425
 Deposit insurance, 226-229, 235, 635-641, 651
 Deposits, 109-110, 207. *See also* Check currency, Credit expansion.
 types of, 378-380
 Depreciation of currencies, 568. *See also* Inflation, World War.
 Devaluation of the dollar, 85-88
 Dewey, D. R., 133n, 170, 482n
 Discount rate. *See* Rate policy.
 Discounts, 110-112. *See also* Loans.
 of Federal Reserve banks, 473-483
 limitations on, 480-482
 Documents, 312-313, 315-324
 Dollar exchange, creation of, 324-326
 Draft, bank, 105, 310-311
 Dulles, E., 622n, 626n

E

Einzig, P., 339, 340n, 613n
 Eldridge, F. R., 314n
 Eligible assets, 483
 Eligible paper, 473-477
 scarcity of, 483
 vs. acceptable paper, 479-480
 Elkin, W. A., 364n, 365n, 371, 372n
 Ellsworth, D. W., 91n
 Emergency Banking Act of 1933, 71, 220-222
 Emergency Farm Mortgage Act of 1933, 813-814, 823-824
 Emmerson, C., 638, 640
 Endorsement. *See* Indorsement.
 Equation of exchange, 528
 Escrow agreement, 762
 Exchange, equation of, 528

Exchange, foreign. *See* Foreign exchange

Exchange charge, 458-460

Exchange equalization account, 342

Exchange rates. *See* Rates of exchange.

Exchanges for clearing, 113, 380

Executor, 757

F

Failures, bank. *See* Bank suspensions.

Farm Credit Act of 1933, 817, 821

Farm Credit Administration, 663-664, 818-827

Federal Advisory Council, 198

Federal Deposit Insurance Corporation, 409-410. *See also* Deposit insurance.

Federal Farm Board, 816-817

Federal Farm Loan Act of 1916, 808, 813

Federal Farm Loan Board, 809

Federal Farm Loan Bureau, 808

Federal Farm Mortgage Act of 1934, 474-475

Federal Farm Mortgage Corporation, 824, 834-835

Federal Intermediate Credit banks
condition statement, 830
interest charges, 815
organization and functions, 814-815, 818

source of funds, 815

Federal Land Banks

advantages of, 813

bonds, 811-813

condition statement, 828-829

loans, 809-811

organization and nature, 808-809, 818

Federal Open Market Committee, 225-226, 233-234, 487-488

Federal Reserve Act

original act of 1913, 196-198

legislative and administrative development, 198-209

amendments, 1916-1932, 202-209

amendments, 1933-1940, 223-236

Federal Reserve Agents, 192, 197, 200

Federal Reserve Agents' Fund, 455

Federal Reserve bank credit, 396-398

factors of increase and decrease in, 398-404

Federal Reserve bank notes, 65, 195, 221-222, 494-496

Federal Reserve banks

and the acceptance market, 435-437

and the commercial paper market, 439

capital, surplus and earnings, 191-192

control of gold movements, 583-587

management, 192-193

note issues, 194-195

powers and functions, 193-194

relations with the government, 195-196

Federal Reserve Board. *See* Board of Governors of the Federal Reserve System.

Federal Reserve Bulletin, 202

Federal Reserve cities, 191

Federal Reserve districts, 190-191, 201

Federal Reserve notes, 194-195, 197, 203, 234

elasticity, 499-506

parity, 498

provision for, 497

security, 498-499

since 1933, 509-510

utility of, 506-509

Federal Reserve System, 190-209

organization of, 198-199

administrative development, 199-202

Fiduciary functions, 755-768

Finance bills, 324-326

Finlay, A. R., 777n

First Bank of the U.S., 128-131

Fisher, I., 535n

Float, 185, 457-458

Foreign exchange, 310-344

and the value of money, 571-592

control of, 342, 364

demand for, 336-337

supply of, 335-336

Foreign exchange market, 329

Foulke, R. A., 304n

Fractional money. *See* Money.

Frederick, K. T., 317

Free Banking Law of New York, 142

G

Gibbons, H. deB., 122n

Gilbart, J. W., 122n

Glass-Steagall Act, 204, 217, 475, 706-707

Gold bloc, 78-79

Gold bullion standard, 26-27, 86

Gold certificates, 44-45

Gold Clause

abrogation of, 75-76

Cases, 89-92

Gold coin standard, 24-26

Gold embargo

of 1917-1919, 64-65

of 1933, 72

Gold exchange standard, 27

Gold movements

artificial control of, 582-587

devaluation and, 587-589

principles governing, 578-582

world value of gold and, 589-592

Gold points, 337-341
 Gold production, 540, 745-747
 Gold Purchase Plan, 79-82
 Gold Reserve Act of 1934, 84-85
 Gold Settlement Fund, 453-455
 Gold standard. *See also* Monetary standards.
 pre-War, 734-735
 post-War, 735-740
 the case against the, 744-746
 the case for the, 746-748
 present outlook, 748-750
 Gold Standard Act of 1900, 63-64
 Gouge, W. M., 128n, 131n
 Government credit money, 45-47, 555-570
 central bank notes, 557-558
 government notes, 556-557
 irredeemable paper money, 558-569
 subsidiary money, 555-556
 Government debt, 169-170, 482, 689-690. *See also* Government obligations.
 Government obligations. *See also* Bonds, high grade, as bank investments.
 as security for National bank notes, 149-150, 165-170
 during the Great War, 604-695
 open market operations in, 484, 492
 Governor
 of Federal Reserve bank, 199
 of Federal Reserve Board, 196
 Graham, B., 36n
 Greenbacks, 57-61
 Gresham's Law, 28-33
 Group banking, 229-230, 647-650, 652-653
 Guardian, 757

H

Hanna, J., 787n, 817n
 Herrick, C., 759, 762n, 763n, 764n
 Hoardings, 536-537
 Home Loan Bank Act of 1932, 217, 496, 786-787
 Home Owners' Loan Corporation, 474-475, 787-788

I

Income account, 303-304
 Income velocity, 538
 Index numbers. *See* Price index numbers.
 Indorsement, 108-109
 Inflation, World War
 in England, 558-561
 in France, 561-563
 in Germany, 563-565
 in the U.S., 569-570, 696-697

Inflation Act of 1933, 74-75
 Institutional investors, 782-785
 Inter-district Settlement Fund, 453-455
 Interest
 on loans, 230-231, 414-415
 on deposits, 230, 416, 419
 Investing institutions, 782-785
 Investment affiliate, 776-778, 789
 Investment banking, 770-790
 Investment house, 771-772.
 functions, 772-775
 Investment trusts, 783-785
 Investments, bank, 112, 230, 306-309.
 See also Secondary reserves, Money market, Bonds, high grade, as bank investments.
 classification of, 387
 savings bank, 793-795
 Items in process of collection, 113, 380

J

Jennings, L. D., 640
 Jevons, S., 15n, 33
 Joint Commission on Agricultural Inquiry, 697
 Joint stock land banks, 813-814

K

Kinley, D., 259
 Kisch, C. H., 364n, 365n, 371, 372n
 Kitchin, J., 535n, 744
 Keynes, J. M., 525, 606
 Knox, J. J., 136n

L

Lawful money, 268n
 Land Bank Commissioner, 823-824
 Laughlin, J. E., 29n, 30, 33n, 54n
 Lawrence, J. S., 349, 352
 Legal reserves. *See* Reserves.
 Legal tender, 38-39, 47, 244-245
 Letter of credit, 315-316
 Liberty Bonds, 694-695
 Liquidity
 of bankers' acceptances, 432
 of bond investments, 448-449
 of call loans, 443-444
 of commercial loans, 305
 of commercial paper, 439
 of secondary reserves, 278-283
 of Treasury bills, certificates, and notes, 446-447
 Loans, 110-112. *See also* Credit expansion.
 agricultural, 805-807, 809-811, 814, 819-820, 822-824
 brokers', 442-445
 classification of, 386

Loans—Continued

- commercial, 290-305
- consumption, 288-290
- investment, 305-306
- real estate, 207-208, 234-235, 794-795
- secured, 305-306
- unsecured, 290-291
- Loans to Industries Act, 476
- Losses, bank, 425-428
- Louisiana Banking Law of 1842, 143

M

Managed currency. *See* Monetary standards.

Management of banks

- Federal Reserve banks, 192-193, 233
- First Bank of the U.S., 129
- member banks of the Federal Reserve System, 231
- National banks, 148
- Second Bank of the U.S., 132-133

Marget, A. W., 537n

Marshall, A., 34n

McFadden Act of 1927, 208-209, 644-645

McGarrah, G. W., 619, 621

Member bank reserve balances, 398-403

Member banks, 191, 202, 205-210, 226, 376

Metals as money, 14-18

Mills, F. C., 683

Minor coins, 47

Mint ratio. *See* Monetary standards, bimetallism.

Mitchell, W. C., 524n, 567, 674n, 742

Monetary development in the U.S.

- Colonial period, 51
- Revolutionary period, 51-53
- 1792-1834, 53-54
- 1834-1862, 54-57
- 1862-1879, 57-61
- 1879-1900, 61-64
- 1900-1932, 64-67
- 1932-1940, 69-99

Monetary gold stock, 398-403

Monetary legislation, acts of

- April 2, 1792, 53
- June 28, 1834, 54-55
- January 18, 1837, 55
- March 3, 1849, 55
- March 3, 1851, 56
- February 21, 1853, 56-57
- February 21, 1857, 57
- February 23, 1862, 57
- July 11, 1862, 57
- March 3, 1863, 57-58
- February 12, 1873, 59-60
- January 14, 1875, 59
- February 28, 1878, 61
- July 14, 1890, 61-63

March 14, 1900, 63-64

April 23, 1918, 65

May 12, 1933, 74-75

June 5, 1933, 75-76

January 30, 1934, 84-85

June 19, 1934, 95-96

Monetary policy

- and defense, 690
- and recovery, 683-690
- and the business cycle, 666-683

Monetary standards

- bimetallism, 28-34, 53-57
- commodity, 34-35
- compensated gold, 35
- gold, 24-27. *See also* Gold standard.
- gold bullion, 26-27
- gold coin, 24-26
- gold exchange, 27
- ideal, 741-744
- managed, 34-35
- monometallism, 24-27
- multiple commodity reserve, 35-36
- paper, 34
- silver, 27, 97
- symmetallism, 34

Monetary system, 18, 21-49

Money

- classification, 48-49, 67-68
- credit, 45-47, 241-242, 261-262. *See also* Bank credit money, Government credit money.
- definition, 4
- demand for, 529-530, 531-533, 536-537, 539, 590-591
- desirable characteristics, 5-6
- fiduciary. *See* Money, credit.
- fractional, 47-48, 52-53, 55-57, 66
- full-bodied, 43-44
- functions of, 6-12
- importance of, 12-14
- in circulation, 398-403
- lawful, 268n
- nature of, 3-6
- normal value of, 534
- origin and development of, 14-18
- representative, 44-45
- standard of debt payments, 11-12
- subsidiary, 47-48, 555-556
- supply of, 538-542
- value of. *See* Value of money.

Money market, 431-450

Monometallism, 24-27

Munn, G. G., 773n

N

Nadler, M., 214n

National Agricultural Credit Corporations, 815-816

National Bank Act
 original provisions, 148-151
 amendments to, 152-154
 National bank notes, 149-150, 155, 164-170, 217, 495-496
 National Banking System
 origin of, 147-148
 development of, 151-155
 defects of, 164-188
 National banks
 commercial institutions, 155-156
 growth and resources, 154-155
 organization provisions, 148-150
 relations with Treasury, 151, 187
 National Credit Corporation, 213-214
 National Monetary Commission, 188-189
 Negotiability, 107-108
 Non-member deposits, 398-403
 Note issues. *See* Bank notes, Federal Reserve bank notes, Federal Reserve notes, National bank notes, Bank credit money, Government credit money.
 Notice on time deposits, 801-803
 Noyes, A. D., 169n

O

One Hundred Percent Reserve Plan, 659-661
 Open market investment committee. *See* Federal Open Market Committee.
 Open market operations, 194, 233-234, 483-488
 control of, 487-488
 effects of, 485-487
 powers of Federal Reserve Banks, 483-484
 Open Market Policy Conference. *See* Federal Open Market Committee.
 Other Federal Reserve Accounts, 398-403
 Over-the-counter market, 782

P

Paper money, 17-18, 43, 51-52, 57-59.
See also Bank credit money, Government credit money.
 Par remittance controversy, 458-460
 Pasvolsky, L., 76n
 Pearson, F. A., 88n
 Phelps, C. W., 610n, 654
 Phillips, C. A., 348-349, 350n, 352, 438n
 Pitman Act of 1918, 65
 Placer gold, 540
 Platt, E., 687
 Preferred stock of banks, 221
 Preston, H. H., 777n

Price index numbers, 519-525
 definition, 519
 current in U.S., 521-522
 general purpose, 522
 weighted and unweighted, 519-521
 Price level. *See also* Value of money.
 and business recovery, 685-687
 and debts, 687-689
 commodity, 521-522
 general, 522-525, 529, 533, 536
 Primary reserves. *See* Reserves.
 Prochnow, H. V., 304n
 Production credit associations, 817-821
 Production Credit Corporations, 818-819
 Profits, bank, 416-417, 425-428
 Promissory note, 102, 105. *See also* Commercial paper.
 single name, 291-292
 double name, 292
 Purchasing power parity theory, 571-575
 limitations on, 575-576
 in relation to gold, 576-578

Q

Qualitative vs. quantitative credit control.
See Credit control.
 Quantity theory of money, 534-535

R

Rate policy
 of the Federal Reserve System, 435-437, 488-492
 of the Bank of England, 489-490, 435
 Rates of exchange, 328-344
 and the value of money, 571-578
 basic, 334-335
 between gold and silver standard countries, 341-342
 control of, 342
 definition, 329
 in paper standard countries, 342-344
 spread between, 331-334
 Reconstruction Finance Corporation, 215-217, 663-664, 817
 Redemption Fund. *See* Reserves.
 Rediscounts, 110. *See also* Discounts.
 Regulation A, 476-477
 rulings under, 477-479
 Reichsbank, 369, 370, 563-565, 598, 736
 Reserve ratio. *See* Reserves, primary and Reserves, required.
 Reserves, 112-113. *See also* Credit expansion.
 central bank, 597-608
 excess, 399, 405
 Federal Reserve System, 463-467
 in England, 604-605

Reserves—*Continued*

- legal. *See* Reserves, required.
- National Banking System, 179-186
- 100 per cent, 659-661
- primary, 272-274, 276-277
- required, 150-153, 185-186, 206, 234, 236, 277, 382-386, 470-472
- savings deposit, 795
- secondary, 278-284. *See also* Money market.
- variable, 712-713
- working, 184-185, 277, 464-465
- Riefler, W. W., 398n, 490
- Robertson, D. H., 567
- Robinson, R. I., 413n, 414n
- Rodkey, R. G., 116n, 176n, 348n, 349n
- Root, C., 141n
- Roscher, W. G. F., 15n, 16n

S

- Safe deposit business, 766-768
- Safety-fund System, 141-142
- Savings bank investments, 782-783, 793-794
- Savings banking, 791-804
- Savings banks
 - departments of commercial banks, 800-801
 - mutual, 796-799
 - needed legislation, 803-804
 - postal, 801
 - stock, 799-800
- Savings deposits, 791-792
 - investment of, 792-795
- Schulst, E. B., 301n, 303n
- Seay, G. J., 464
- Second Bank of the U.S., 131-135
- Secondary reserves. *See* Reserves.
- Secretary of the Treasury, 149, 151, 196
- Securities Act of 1933, 788-789
- Securities Exchange Act of 1934, 789-790
- Seigniorage, 41-42
- Service charges, 415, 419
- Sherman Silver Purchase Act of 1890, 61-62
- Silver Purchase Act of 1934, 95-96
- Silver
 - history of, in U.S., 53-66
 - program of Roosevelt Administration, 94-99
 - standard, 27, 97
- Smith, A., 122n
- Snyder, C., 259-260, 522, 524n, 683, 728
- Spahr, W. E., 88n, 172, 178n, 454n, 455n
- Sprague, O. M. W., 83, 182n
- Stabilization Fund, 85, 94, 342
- Stabilization of business, 363-364
- Stabilization of prices, 362-363

- Standard money, 41-42. *See also* Monetary standards.
- and bank credit money, 544-554
- and government credit money, 555-570
- State Bank of Indiana, 143-144
- State Bank of Ohio, 144
- State banking
 - 1811-1816, 131
 - 1836-1863, 135-139
 - 1863-1913, 156-161
- Sterilization of Gold, 94
- Stock exchange, 780-782
- Subsidiary money. *See* Money.
- Suffolk system, 139-141
- Surplus, 114
- Supply of money. *See* Money.
- Symmetallism, 34.
- Syndicate, 773-775

T

- Taggart, J. H., 640
- Taylor, F. M., 12, 37n, 518, 534n
- Thomas, R. C., 660n, 661n
- Thorp, W., 742
- Time loans to brokers, 444-445
- Tolerance, limits of, 42
- Towers, G. F., 314n
- Trade acceptance, 107, 292-293
- Treasury
 - bills and certificates, 282-283, 445-446, 484
 - bonds, 447-448. *See also* Government obligations.
 - cash, 398-403
 - currency, 398-403
 - deposits with Federal Reserve bank, 398-403
 - notes, 446-447, 484
- Tri-partite Agreement, 92-94
- Trust. *See also* Trustee, Trusts
- companies, 783, 765-766
- functions, 207, 755, 768
- receipt, 317
- Trustee, 755
 - corporate, 765-766
 - corporate mortgage, 759-760
 - corporate vs. personal, 763-765
 - depository, 761-762
 - registrar of securities, 760-761
 - stock transfer agent, 760
- Trustor, 755
- Trusts
 - community, 763
 - corporate, 759
 - court, 757
 - personal, 756
 - under private agreement, 757
- Turnover
 - inventory, 302

receivables, 302
Twenty per cent rule, 349-352

U

Underwriting, 773-774
Undivided profits, 114
United States Notes, 57-61

V

Value of money
bank credit money and the, 544-554
business cycle and the, 683-684
determination of the, 527-543
cash-balance approach, 530-533, 535-536
cash-spending approach, 527-530, 537-538
normal value, 534
short term changes, 535-538
government credit money and the, 555-570
international exchange and the, 571-592
meaning, 515-518
measurement of. *See* Price index numbers.
Velocity of circulation, 528-529, 533, 537-538, 548-549

W

Ward, W., 324
Warren, G. F., 80, 82, 88n
Watkins, L. L., 175n, 180n, 181n, 185n, 660n, 713n
White, H., 131n, 244n
Whitney, C., 535n
Whittaker, A. C., 108n
Wilcoxon, L. C., 535n, 744n
Willis, H. P., 16n, 190n, 199n, 783n, 785n
World Monetary and Economic Conference
consultations with foreign powers, 72-73
developments during, 76-78
failure of, 78
Preparatory Commission Report, 69-70
silver agreement, 94-95

Y

Yield, comparative, of secondary reserve investments, 449-451
Young, A. A., 519n
Young, J. P., 565n
Young Plan, 613

APPENDIX

CURRENT MONETARY AND BANKING DEVELOPMENTS

INTRODUCTORY NOTE

As always in wartime, the problem of money and monetary arrangements looms large, especially that phase of the problem which is concerned with post-war monetary policies. Monetary policy during war is highly important, but post-war policy is even more so. This is particularly true of a country like the United States, whose people are devoted to a high degree of freedom of thought, expression, action and business enterprise. Such a people will do much to aid in the winning of a vital war, and, indeed, have done so. They are less amenable, however, to disciplinary restraints in peacetime. Hence the particular importance of the post-war monetary problem.

Obviously, the reconversion from war to peace will be marked by many changes in all paths of life. Post-war plans have for some time loomed large in the thoughts of our economists and business leaders. This attitude is definitely desirable. Yet it is not humanly possible in business and financial affairs to draw up a precise plan of future action and stick to it without deviation. This is particularly true of large social problems, like that of money and monetary policy in a democratic country such as ours. We must expect a good deal of controversy and debate before final agreement is arrived at.

Since any plans now proposed are likely to be altered more or less radically before final adoption, it seems sensible at this time not to undertake a thorough-going revision of the author's "Money and Banking." Yet the wartime monetary experience and the post-war plans that have thus far mate-

rialized are of the utmost importance and should be brought sharply to the attention of students in the money and banking field. The following monograph, therefore, had been written with the idea of summarizing current developments, leaving in abeyance a complete revision of the text until the uncertainties of the "conversion to peace period" have given way to definite accomplishment.

F. A. B.

WARTIME PRICE CONTROL

Although the price level of the United States, and other countries, has showed a number of upward or downward movements in the last century and a half, the changes of alarming severity have occurred during and following major wars. Thus, in this country, the War of 1812, the Civil War and World War I were accompanied by extreme price level increases, followed by major collapses. With our entry into World War II, the question arose as to the possibility of controlling prices in such a way as to prevent inflation without impeding the efficient prosecution of the war.

When a country goes to war, a certain proportion of its productive resources must be diverted from peacetime to wartime pursuits. If, upon entry into a war, business is sluggish or depressed, war demands may at first simply result in putting hitherto idle labor and unused resources to work for war production. But increased employment will result in increased consumer demand and it will soon be necessary to restrain consumption to the end that sufficient war production is maintained.

This diversion of productive resources to the war effort may be accomplished by the government in three ways. The first and simplest would be for the government to issue legal tender paper money directly or obtain such money by borrowing at the central bank through the discounting of its Treasury bills. A similar result is attained by selling government securities to the commercial banks. The latter credit the account of the Treasury in the amount of such securities purchased, the Treasury thereby obtaining "check currency" with which to pay for its war orders.

The foregoing type of war financing increases the mone-

tary demand of the government without decreasing monetary demand of consumers. The result is inflationary. The government must bid up the prices of labor and materials to such a point that its demands will take precedence over those of consumers. But the diversion of labor and materials from the consumption goods industries will lead to higher prices for consumption goods. The general price level will thereby be raised. The government obtains its share of the national product by forcing individuals to pay more for what they purchase, thereby decreasing consumption.

A second method of financing a war, theoretically the best but practically most difficult, would be for the government to raise the entire amount necessary to pay for its war purchases by increased taxes. No increase in monetary purchasing power is here involved. Consumption is curtailed because consumers have had to turn part of their income over to the government and hence have less with which to demand goods. The war needs of the government are met without the necessity of forcing up prices all along the line as under the first method discussed.

Another way to finance a war without inflationary effects is for the government to sell its own interest-bearing securities to investors other than the commercial banks or central bank. If Brown buys a \$100 bond and gives his check for same, the Treasury's account will be increased \$100, but Brown's will be decreased by a like amount. No new money will be created. A certain proportion of consumers' money income will be transferred to the government through bond purchases and the government will use this to obtain what it needs of the national product for war purposes.

Actually, a combination of all three methods is generally resorted to. To finance an expensive war entirely by taxation is politically impracticable in a democratic state. Tax rates would have to be raised to such heights as to discourage the interest of the people in winning the war. True, the actual burden is no greater than that incurred under inflation (Method 1 above) and would probably be more fairly distributed, but the public is usually more annoyed by higher taxes than by higher prices. The method of borrowing from individuals (or institutional investors) offers an inducement

over high taxes in the form of interest payments and the eventual repayment of principal. Unless such a method of financing is made compulsory, however, as are taxes, it is doubtful if the entire cost of the war could be financed in this way.

In financing World War II, the United States has aimed to obtain as much revenue as possible from taxes and bond sales to investors with a minimum resort to the commercial banks. Taking the four years of the defense program and the war as a whole, the Treasury has obtained 87 billion dollars from taxes, 89 billion dollars from bond sales to investors and 64 billion dollars from the commercial banks.¹ Roughly, this represents revenue of 36 per cent from taxes, 37 per cent from bond sales, and 27 per cent from the commercial banks.

For the fiscal year ending June 30, 1944, taken above, the showing is even better, 47 per cent of revenues having come from taxes, less than 13 per cent from the commercial banks, and the remainder from bond sales to investors.²

In spite of this excellent showing, there has been as noted, an increase of some 60 billion dollars in liquid funds (check currency) arising out of commercial bank purchases of governments. Moreover, bonds sold to investors may be cashed in by the holders before maturity at some loss of interest, thereby creating a very large amount of potential purchasing power. This being the case, it seemed unlikely that an inflationary rise of prices could be prevented without supplementary measures of direct price control. The government accordingly initiated such measures.

Direct price control.—It is not intended here to discuss the technique of the price control measures adopted,³ but rather to appraise their results.

It should be noted, in this connection, that the United States was in a better position to effect price control at the outset of this war than it was when the country entered

¹ E. A. Goldenweiser, *Commercial Banking After the War*, Federal Reserve Bulletin September 1944, p. 871.

² The Guaranty Survey, September 26, 1944, pp. 2-3.

³ For a discussion and appraisal of various possible techniques, see C. O. Hardy, *Wartime Control of Prices*, Brookings Institution, 1940.

World War I in 1917. At the latter time, the country's business was already operating at about capacity levels, and the B.L.S. wholesale price index had risen to 173 (1913 = 100). An inflationary movement was therefore well under way. At the time the country entered World War II, the wholesale price index stood at 94 (1926 = 100) and large expansion of production was still possible without inflationary price increases as there was still unused plant capacity and a large number of unemployed.

With our actual entry into the war, however, this situation would not long continue and price controls seemed desirable. The problem of price control is not accomplished easily. It is not merely a matter of fixing ceiling prices on commodities. Costs, including the highly important cost—wages—must be fixed as well. Moreover, production must be directed, so far as necessary, into lines that will make for the successful prosecution of the war, and remaining goods must be rationed fairly among the consuming public.

It should be clear that, if labor and material costs are stabilized, and no restrictions are placed on who shall use labor and materials for the production of goods are set up, there would be no assurance that production would be properly directed. It is impossible to suspend the regulative function of free market prices without also setting up controls over the amounts and types of goods to be produced.

In attempting to solve this problem, the government agencies not only fixed ceiling prices on the majority of goods, but also prohibited entirely the production of some civilian goods—automobiles, radios, washing machines, electric refrigerators, etc.—and issued priorities on deliveries of various materials based on their relative importance for war or civilian needs. Thus civilians have been deprived of many peacetime goods, of some because they are not being produced at all and of others because their quantities are extremely limited.

Critique of U.S. price control.—In appraising wartime control of prices in the United States during World War II, it would be possible to find many minor points which deserve criticism. This would doubtless be true in any country

attempting a difficult task of this magnitude. For example, control has been scattered among several agencies⁴ instead of being centralized under one responsible head. Annoying duplication of reports has also caused objections. Unduly complicated procedures might also be mentioned.

From the point of view of preventing inflation, however, with which we are here concerned, the agencies have done a better job than might have been anticipated. The B.L.S. wholesale price index stood at 93.6 (1926 = 100) in December 1941 and at 104.1 in July 1944, while the cost of living index moved from 110.5 (1935 — 39 = 100) to 126.1 in the same period. Since the beginning of 1943, the movement of both of these indexes has been comparatively slight.

It must be remembered, of course, that these are official indexes and are not quite as accurate as in ordinary peace times due to the existence of rather widespread black markets in which prices are far above authorized ceilings, but which, being illicit, are naturally impossible of inclusion in the price indexes compiled by the Bureau of Labor. It has been estimated that the American public has spent as much as two billion dollars a year in paying black market premiums, but how many points this would raise the cost of living index it is impossible to say.

In spite of black market activities, which are practically impossible of complete eradication, the record of American price control during World War II, judged from over all results, has been decidedly successful. It has been annoying to many, but the bulk of the public has co-operated sufficiently to make the program work.⁵

The domestic post-war outlook.—While the wartime control of prices in the United States has been successful, the most crucial period lies ahead. With the conclusion of

⁴ The Office of Price Administration (O.P.A.), the War Labor Board (W.L.B.), the War Production Board (W.P.B.) and the War Food Administration (W.F.A.) have been the chief agencies.

⁵ It should be pointed out here that one major reason for such widespread public co-operation has been the maintenance of civilian production at comparatively high levels. Except for durable consumers' goods, which have not been produced at all, civilian needs have been well met in most lines. Had scarcities, such as those in gasoline and nylons, developed in many lines, black markets would have been more widespread and over-all control of prices probably considerably less successful.

the war in Europe, two things will probably happen. First, a large amount of facilities will no longer be required for war production, and, second, the public will start clamoring for a variety of goods of which they have been deprived during the war. It will take time, in many lines, not only to convert war plants to peacetime production, but, even after conversion, to put goods on the market rapidly enough to prevent an inflationary rise in prices that could be well-nigh disastrous.

With a public backed with 100 billion dollars of incipient purchasing power in the form of cashable war bonds and savings accumulated during the war, the immediate elimination of all controls on prices, including ceilings and rationing, would start an upward surge of prices which could easily make the 1919-20 inflation seem mild by comparison. As one able student has expressed it, "It will be wise after this war to make a transition from war to peace economy through a period of controlled decontrol."⁶

In essence, the problem is this. Some goods can be put on the market in sufficient quantities to meet consumer demand without great difficulty. Others will necessarily be temporarily scarce. Without some control, prices of the latter type of goods would rise inordinately—automobiles being the most striking example—and this would be sufficient to set off an inflationary surge of prices, not only in the scarce lines, but, later, spreading to others as well. If prices and distribution of the scarce commodities are controlled for a time, until the pent-up war demands for these goods have been satisfied, the possibility of averting a serious inflation is greatly heightened.

Granting the wisdom of "controlled decontrol," what, practically, are the chances that such a program will be followed? From the attitude of the existing control authorities the outlook is reassuring. In a current article in *The Saturday Evening Post*, Mr. Chester Bowles, present director of the O.P.A., has stated that agency's position ably and clearly.⁷ Referring to 1918, Mr. Bowles writes, "After the

⁶ J. B. Condliffe, *The International Economic Outlook*, The Committee on International Economic Policy, New York, 1944.

⁷ C. Bowles, *Will Things Cost More After the War?*, *Saturday Evening Post*, October 14, 1944.

last war, officials like myself had their hats on their heads and the office door locked even before the echoes of the Armistice bell ringing and whistle blowing had died away." Mr. Bowles would like to go home himself, but, remembering the unfortunate 1919-20 inflation, decides it would be better to stay on the job for a while.

The chief danger will arise out of the attitude of the public. Deprived of many goods during the war, and forced to take others of inferior quality, it is quite natural that people will be extremely anxious to obtain pre-war goods and pre-war quality as soon as possible. The trouble is that many of the goods for which consumer demand will be most intense cannot immediately be put on the market in sufficient volume to satisfy these demands at pre-war prices.

The proper course of action would be to maintain controls in these particular lines (chiefly consumers durable goods), relaxing them gradually and removing them as soon as possible to do so with safety. This appears to be the aim of the O.P.A. at present, and seems to have rather widespread support among producers according to Mr. Bowles, present O.P.A. head.⁸

To follow this course, however, requires congressional sanction. The price control act has been extended to June 1945. From present indications, this should see the country through the termination of the war in Europe, but not much beyond that point. If, when the present law expires, congressmen should receive *emphatic* and *widespread* objections from their constituents to any continuation of controls, it would be extremely doubtful if an extension of the law in existing or modified form could be expected.

Of course, the fact that the government will probably still have the Pacific phase of the war on its hands may make the public more amenable to some continuation of controls. This will be especially likely to be the case of the control agencies act promptly to remove from the list of controlled commodities any goods that can be put on the market in sufficient quantities to prevent an inflationary rise of prices. Since this is the avowed intention of the O.P.A., it is to be hoped that the public will co-operate sufficiently to ensure

⁸ *Ibid.*

an orderly or "controlled" relaxation and removal of ceilings and rationing.

THE INTERNATIONAL MONETARY OUTLOOK

Turning from a consideration of domestic prices to the international scene, chief interest centers at present around the agreements reached at the monetary conference held at Bretton Woods, N. H., in July 1944. These agreements, signed by the delegates of some 44 participating nations, provide for the establishment of an International Monetary Fund and of an International Bank for Reconstruction and Development.

It should be emphasized that the plans agreed to at the conference are not final. They must be submitted to the governments of the nations concerned for final approval, amendment or rejection. Thus, while agreement among the delegates of so many nations is a cause for satisfaction, it seems highly unlikely that the proposals in their present form will be adopted finally without some, perhaps numerous, changes. However that may be, the point of departure for current discussion of international monetary arrangements consists of the agreements reached at Bretton Woods and the nature of these agreements should therefore be indicated. Limitations of space necessitate description of the more salient features only, and of those but briefly.

The International Monetary Fund.—Plans for post-war monetary stabilization began to attract attention in the spring of 1943, with the publication of the White (American) Plan on April 6, followed two days later by the Keynes (British) Plan. A French Plan was made public on May 9, and Canadian experts submitted a proposal on June 9. A revised edition of the White Plan was issued on August 19, after discussions with experts of other nations. These various plans were studied by experts of some 30 nations and a joint statement was prepared as a basis for discussion and action at the Bretton Woods conference.⁹

⁹ Texts of the original American and British plans appeared in the Federal Reserve Bulletin, June 1943, pp. 501-521. The complete text of the Canadian Plan was printed in the Bulletin, August 1943, pp. 718-728. The September 1943 Bulletin, pp. 827-840, carried the revised White Plan, and the Joint Statement appeared in the Bulletin, May 1944, pp. 436-441. For a summary and discussion of the various plans,

The agreements reached at the Bretton Woods conference followed rather closely the main outlines of the Joint Statement. Much of the time of the conference was devoted to determination of exact size of quotas and similar matters. The most significant points in the agreements are summarized in the following paragraphs.

Purposes.—The purposes of the International Monetary Fund may be set forth in full. They are:

1. To promote international monetary coöperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems.
2. To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.
3. To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.
4. To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade.
5. To give confidence to members by making the Fund's resources available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.
6. In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.

The purposes of the fund, as thus set forth, are not only unobjectionable but praiseworthy.

Quotas.—Under the agreements each member country is assigned a quota. The quotas arrived at vary from \$500,000 for Panama and Liberia to \$2,750,000,000 for the United States. The United Kingdom with \$1,300,000,000 and the U.S.S.R. with \$1,200,000,000 are the two other large subscribers. Total quotas amount to \$8,800,000,000.

clearly and briefly presented, see *World Currency Stabilization Proposals*, Chamber of Commerce of the United States, June 1944. The author of this pamphlet is Arthur W. Crawford of the Chamber staff.

Subscriptions to the Fund by members are in gold or national currencies. The amount of the subscription payable in gold is fixed at 25 per cent of a country's quota or 10 per cent of its net official holdings of gold and dollars, whichever is smaller. Estimated gold subscriptions total \$1,643,000,000.

Values of currencies—exchange rates.—Once par values of the various members' currencies are fixed, each member agrees to permit exchange transactions between its currency and that of other members at the par rate plus or minus a small handling charge—one per cent on spot transactions. If necessary to maintain rates, gold may be freely bought and sold within the prescribed range.

However, if a country deems it necessary for the correction of a fundamental disequilibrium, it may alter the value of its currency by 10 per cent without the concurrence of the Fund. Alterations of currency value embracing a further 10 per cent may be made with the concurrence of the Fund, but the Fund must concur or object within 72 hours. Any additional alterations in value require the concurrence of the Fund, but a longer period is allowed for concurrence or objection. If the Fund objects, the change may not be made. If made in the face of such objection, the member may be denied further use of the Fund's resources and facilities.

A further provision permits the Fund to make uniform changes in the par value of all currencies, although a given member may retain its old par if it desires to do so.

Exchange restrictions.—Member countries are under obligation not to impose exchange restrictions on current transactions, although restrictions on capital transfers may be set up by any country. The Fund has the power to determine what are and what are not capital transfers. Members are also obligated not to enter into or maintain discriminatory currency arrangements and practices.

Exception to the above obligations on exchange restrictions is permitted during the transitional period. At the end of three years exchange restrictions still in force on current transactions must be reported by the Fund and any country maintaining such restrictions after five years must consult with the Fund, with a view to attempting their removal.

Should the Fund order the removal of such restrictions and should the country fail to comply, said member may be required to withdraw from the Fund.

Exchange restrictions on current transactions may also be imposed with respect to scarce currencies, discussed below.

Transactions with the Fund.—Most important among the transactions permitted with the Fund is the right granted to member countries to buy other members' currencies, paying therefor in their own currencies. This amounts to borrowing from the Fund. Any member may buy other currencies in this manner up to 25 per cent of its quota in one year, with a top limit of 200 per cent of its quota. Progressive charges are levied on a member on currency in excess of its quota held by the Fund. Charges progress with the amount of the excess and with the length of time such excess is held by the Fund.

Certain requirements for the repurchase of members' currencies from the Fund are also included in the agreements, the purpose being to maintain a balanced condition of currencies held by the Fund.

Scarce currencies.—In the event that any member country exports more than it imports for a continuous period, the demand for that country's currency will result in a scarcity of such currency in the Fund. If such a situation develops, the Fund may declare that country's currency scarce and apportion the supply among the members demanding it.

If a member's currency becomes "scarce," that currency may be sold to the Fund for gold or be purchased by other members for gold, or the Fund may borrow the scarce currency from the member in question or from other members having a supply of it. However, no member whose currency has been declared "scarce" is compelled to lend to the Fund. Its original quota subscription is its total required contribution to the Fund.

Should the purchase of a scarce currency for gold come to an end and should the member with the currency scarcity refuse to lend to the Fund, member countries are allowed to establish exchange restrictions in transactions involving the scarce currency. Since members are obligated to maintain exchange rates within the narrow limits previously referred to,

action of this sort would be necessary in the circumstances.

Management.—The management of the Fund is vested in a Board of Governors, one member to be appointed by each member country. Voting power is in proportion to members' quotas, so that votes of the United States, the United Kingdom and Russia would constitute a substantial majority. Provisions are included for an executive committee and other managerial details which need not concern us here. Transactions with the Fund are to be with central banks, stabilization funds or national treasuries. It is presumed that the run of transactions will be carried out in the private foreign exchange markets, with resort to the Fund through official channels when necessary.

The International Bank for Reconstruction and Development.—Without going into details, it may be stated that the purpose of the International Bank, as its full title indicates, is to aid in the reconstruction and development of war-torn countries who will need assistance in getting their economies back on a productive peacetime basis. The Bank has an authorized capital of \$10,000,000,000. Of this amount, plus any surplus and reserves, 20 per cent may be used in making direct loans. The remainder can be called for only to meet losses. Although the Bank's authorized capital is large, subscriptions are payable at the time of beginning business only to the extent of 2 per cent in gold or United States dollars and, within a year, 8 per cent in member countries' own currencies. Further calls are not to be made unless necessary.

Nature of business.—The Bank is empowered to make direct loans from its own funds or from borrowed currencies and to guarantee loans made through private channels. Direct loans are to be made only (a) when the need for them is clear and the prospects of repayment good, and (b) when such loans cannot be negotiated through private channels under reasonable terms.

Thus the Bank is designed to supplement and re-enforce private lending, and in no sense to displace it. It is hoped that the Bank's power to guarantee loans will stimulate private lending at reasonable rates. The risk of loss to private lenders being sharply decreased (as a result of the Bank's

guarantee) would naturally make possible the placing of private loans at materially lower rates than would otherwise be demanded.

Provisions regarding management, protection of lending countries, and other matters are contained in the agreements, but need not be presented here. Our main interest lies in the general place and function of the Bank in the post-war international financial picture as an incentive and supplement to private lending.¹⁰

Critique of Bretton Woods Agreements.—Since the publication of the agreements reached at Bretton Woods, they have been subjected to a considerable amount of criticism from American economists and others. They have also received their share of support as representing at least laudable international co-operation in the direction of monetary stability.

Among the criticisms of the agreements, one which deserves mention is the fact that the provisions of the monetary fund are too general. Member nations are allowed too much leeway to do as they please without sufficient control by the Fund. For example, any member may devalue its currency by 10 per cent on its own initiative. Further devaluation, to the extent of another 10 per cent must be reported to the Fund, which may object within 72 hours, but it seems unlikely that such objection would be made or, if made, would carry much weight. Assuming due care to have been used in fixing parities, any departure from the same should be considered as a serious matter requiring careful scrutiny and deliberation by the Fund plus adequate power to enforce the Fund's final decision.

Again, some objections have been raised regarding the matter of exchange restrictions. Although member countries are supposed to eliminate exchange restrictions as rapidly as possible, they may impose such restrictions for a period of

¹⁰ The writer is fully aware of the extreme condensation of the foregoing summary. Although an attempt has been made to touch on all points of really fundamental importance, many questions concerning matters not here discussed may arise in the minds of some readers. For all details, the *Articles of Agreement* themselves, published by the United States Treasury, must be referred to. For an excellent summary, considerably more detailed than that here presented, the reader is referred to E. A. Goldenweiser and A. Bourneuf, *Bretton Woods Agreements*, Federal Reserve Bulletin, September 1944, pp. 850-870.

five years in order to correct a fundamental disequilibrium. Whether such disequilibrium exists is determined by the country imposing the restrictions, the Fund having no authority on this matter for three years, and only in an advisory capacity for two years more. Moreover, dealings in scarce currencies, to be discussed presently, may be subject to restrictions by other countries at any time. Thus, there is a grave question whether the elimination of exchange restrictions would be much more effective than if no Fund existed.

The provisions for borrowing from the Fund have also been criticized. As noted above (p. 858), any member may purchase other countries' currencies, paying therefor in its own currency, up to 25 per cent of its quota in one year, with a top limit of 200 per cent of its quota. Thus a country with a purely fiat currency may obtain the soundest currencies by this method. It amounts to making loans of currencies without any regard to the soundness and ability to pay of the borrowing member.

The gravest objections to the agreements in the present form concern the provisions with respect to scarce currencies. If there is an exceptionally large demand for a given currency, say dollars, so that the Fund's supply of such currency becomes unduly attenuated, that currency may be declared scarce. If this happens, either exchange restrictions may be imposed on dealings in the scarce currency by other members, or the country whose currency has been declared scarce may relieve the scarcity by lending additional currency to the Fund.

In an orderly world, of the type existing in the decades prior to World War I, this might not be a matter of great moment. As a result of the present war, however, the United States will emerge as the great creditor country, practically all of the other nations being in a debtor position. In addition there will be a large demand for dollars to pay for American exports which will be needed acutely by many foreign countries. It seems inevitable, therefore, that dollars will become scarce, and the United States will then be confronted with three alternatives.

Two of these alternatives may be considered almost as one. The United States may cease exporting or may allow

the dollar to be subjected to exchange restrictions by foreign member countries. These are two sides of the same problem. If trading in dollars is restricted because of scarcity of same, importers in other countries will not be able to get dollars to pay for American goods and our exports will hence be sharply curtailed. As Lord Keynes has put it, "The Americans, who are the most likely to be affected by this, have, of their own free will and honest purpose, offered us a far-reaching formula of protection against a recurrence of the main cause of deflation during the inter-war years, namely the draining of reserves out of the rest of the world to pay a country which was obstinately borrowing and exporting on a scale immensely greater than it was lending and importing. Under Clause VI of the plan a country engages itself, in effect, to prevent such a situation from arising again, by promising, should it fail, to release other countries from any obligation to take its exports, or, if taken, to pay for them."¹¹

It seems unlikely that the United States would be agreeable to such a situation. Lord Keynes goes on to add: "I cannot imagine that this sanction would ever be allowed to come into effect. If by no other means, than by lending, the creditor country will always have to find a way to square the account on imperative grounds of its own self-interest,"¹² and he is undoubtedly correct. But this would mean a continuous increase in dollars loaned to the Fund with resultant dilution of our currency and probable inflation in this country.

It is easy to understand why Lord Keynes should favor such a set-up. In fact, he is very frank in stating that such action by the United States would make it possible for England to proceed subject to no deflationary forces. To allow this to occur at the expense of inflation in the United States, however, is not in line with the best interests of this country. It is on precisely this ground that one very able American economist has come out in opposition to the Fund in the present form of the agreements.¹³

One further objection to the plan for an international

¹¹ Speech of Lord Keynes on the International Monetary Fund Debate, House of Lords, May 23, 1944.

¹² *Ibid.*

¹³ L. P. Ayers, *The International Monetary Fund*, Lecture before Graduate School of Banking, American Bankers Association, June 23, 1944.

monetary fund, in its present form is that it is too vague and too complex. To cite one example, the question has often arisen as to whether or not the operation of the Fund will or will not resemble the gold standard in its operations. On this point, it might be well to quote two expert authorities:

"The fundamental forces at work would be the same under both systems. Under the gold standard, as under the Fund, each country ultimately must find means of paying for its foreign purchases by the sale of its goods and services. Under both arrangements temporary deficits can be met by gold shipments and by credit, and under neither of the arrangements can these methods offer permanent solutions."¹⁴

"Instead of maintaining the principle that the internal value of a national currency should conform to a prescribed *de jure* external value, it provides that its external value should be altered if necessary so as to conform to whatever *de facto* internal value results from domestic policies, which themselves shall be immune from criticism by the Fund. Indeed, it is made the duty of the Fund to approve changes which will have this effect. That is why I say that these proposals are the exact opposite of the gold standard."¹⁵

Dr. J. H. Williams, in commenting on the original Keynes and White plans, likened their probable operation to that of the gold standard but says the final plan will give little comfort to gold standard advocates.¹⁶ It would seem to be desirable to have a plan which is clear enough so that at least the experts will agree about such a significant point. The monetary fund agreement apparently fails to fill the bill in this respect.

With regard to the international bank, much less comment appears to have been invoked. One able observer has expressed the belief that the capital of the Bank is much too large for an institution which is planned only to supplement private investment in the reconstruction period.¹⁷ He also believes that the amount of foreign lending should not be great

¹⁴ E. A. Goldenweiser and A. Bour-euf, *Bretton Woods Agreements*, Federal Reserve Bulletin, September 1944, p. 851.

¹⁵ J. M. Keynes *Op. cit.*

¹⁶ J. H. Williams, *Postwar Monetary Plans and Other Essays*, New York 1944, pp. 6-7 and xi.

¹⁷ Mr. W. W. Aldrich, *Some Aspects of American Foreign Economic Policy*, address delivered before the Executives Club of Chicago, September 15, 1944.

and that some expansion of the powers of the Export-Import Bank would be all that is necessary to meet the situation.

The author's own views correspond rather closely with the criticisms that have been summarized in the preceding paragraphs. The ability of any member country to alter its currency value by as much as 20 per cent means merely that members will do as they choose within comparatively wide limits about determining the international value of their currencies. That this is deemed to be the case by Lord Keynes is indicated by the following quotation from his speech to the House of Lords on May 23, 1944:

"My noble friend Lord Addison asks who fixes the value of gold. If he means, as I assume he does, the sterling value of gold, it is we ourselves who fix it initially in consultation with the Fund; and this value is subject to change at any time on our initiative, changes in excess of 10 per cent requiring the approval of the Fund, which must not withhold approval if our domestic equilibrium requires it."¹⁸

Apparently each country would determine the matter of its own equilibrium in the international set-up. It would appear, in fact, on this score, that there might just as well not be a Fund.

The provisions on "exchange restrictions" are also open to question. Here again it appears that each country may be its own judge, at least for five years, as to whether or not exchange restrictions should be enforced. Moreover, restrictions on scarce currencies may be imposed by any country without control by the Fund. Countries are also permitted to control exchange at any time in relation to capital transfers. It is a matter of grave doubt whether capital transactions and current transactions can be readily separated for purposes of exchange control.

The fact that the dollar will doubtless be the chief scarce currency unless the United States lends more or less continuously to the Fund has already been sufficiently commented upon. It forms one of the gravest dangers of accepting the provisions of the agreement in their present form.

Another factor which is not really a criticism of the agree-

¹⁸ *Op. cit.*

ments has been emphasized in certain quarters.¹⁹ This is that agreements for multi-lateral trade, reduction of tariffs, and removal of other trade barriers is essential to the successful working of any monetary arrangement. Mr. Aldrich feels strongly that freeing world trade from obnoxious restrictions should precede attempts at monetary stabilization. The author believes rather that the two are complementary and should go together. Certainly no plan for monetary stabilization can be expected to succeed unless trade is freed from the shackles which bound and hampered it in the period between the wars. Unhampered and nondiscriminatory multi-lateral trade, it cannot be too roundly emphasized, is most needed in the post-war period. The development of such trade can be made easier by satisfactory international monetary arrangements, but the latter, by themselves, can be of little avail without the former.

In the second edition of his *Money*, published in 1933, the author stated, "The real choice does not rest between the gold standard and a managed irredeemable paper currency. It rests rather between freedom of international trade with its attendant advantages and a narrow policy of economic isolation accompanied by a lower standard of living. If the former course is chosen, the gold standard will prove to be the most satisfactory monetary arrangement", and this statement has been repeated in all later editions. There seems to be no reason for changing it markedly now with reference to what might be termed the post-post-war or post-transition period. And it should be noted that the agreements contemplate the longer range use of the Fund, by precluding its use in handling immediate and pressing post-war problems.

The laxity of control with regard to currency valuations, exchange restrictions and other matters now included in the agreements might be defended as being necessary in the readjustment period. It will be at best some years before stable financial conditions are arrived at. During this time numerous adjustments will have to be made. Once stability is attained, however, many of the Fund provisions should be eliminated.

¹⁹ See *op. cit.*, Aldrich, Condliffe, etc.

The statement that, with widespread freedom of trade, the gold standard would prove to be the most satisfactory arrangement in the post-transition period should be qualified further to be acceptable. Sound financial conditions within the various countries should be maintained and the attainment of a reasonable degree of business stability (through credit control, fiscal policy, or whatnot) is also necessary. Then international trade could seek the most desirable and economical channels, and moderate gold movements (or changes in ownership) would suffice to settle international balances.

It would also seem highly desirable to have a world bank to hold central bank balances, make short-term seasonal loans, and serve as a place for consultation, discussion and research. Such a bank would, in the nature of the case, serve as a clearing agent and avert the nuisance and expense of actual physical gold movements.

Is such a picture unduly idealistic, or is there a possibility of attaining these ends? Past experience and strict honesty of outlook do not carry much hope. Yet something may be done. The United States, Great Britain and other countries have done much better on price control in World War II than they did in the last war. Perhaps it is not too much to hope that they will also do better in the post-war period this time.

What needs to be done if we are to make any appreciable strides toward a smooth-running international economy? The freeing of trade from impossible restrictions and barriers has already been mentioned and is highly important. There is good cause for hope that something constructive will be done along this line.

Another equally essential step, which will be more difficult of accomplishment, is to reduce to manageable proportions the maze of debts with which the world is fettered. Debts of other countries to the United States arising out of this or the last war should be cancelled. On the surface, this means an added burden on the people of the United States. If such action helps to stimulate world activity and trade, however, the result would be well worth the cost. The disastrous experience with war debts and reparations, plus a high

American tariff, after the last war should be ample evidence of the truth of this statement.

It seems essential to the writer that the network of international indebtedness, public and private, be adjusted and reduced to manageable proportions. This means, of course, immediate loss to the creditors, but if, thereby, the world can be put in a position where it functions freely in the economic sphere, the immediate losses will be covered manyfold by future gains.

The immediate problem.—An alternative approach to the problem of post-war monetary stabilization is referred to as the Key Currencies approach, and has been advocated by, among others, J. H. Williams, Leon Fraser, W. W. Aldrich, the American Bankers Association, and the National Foreign Trade Convention. The Key Currencies proposal advocates an immediate stabilization of the dollar and the pound as the two major key currencies. If this could be accomplished, other countries could stabilize their currencies on a dollar-pound basis when possible to do so. The eventual result would presumably be a general international stabilization of exchange rates.

To effect an immediate post-war stabilization of the dollar-pound rate without exchange restrictions would probably require a considerable grant-in-aid by the United States to Great Britain. Mr. Fraser has suggested a \$5 billion gold credit and Mr. Aldrich has also recommended a large grant-in-aid to Great Britain.

John H. Williams, an expert in fact as well as in name, was perhaps the earliest well-known advocate of the key currencies principle. In a recent post-conference article²⁰ he retains the same view. He writes, "I believe not only that the solution must be found through the key currencies principle, as seems now to be recognized, but also that it must be a gradual process and must be built upon the stabilization of the two key currencies, the dollar and the pound, with respect to each other. As a matter of logic as well as of mechanics, it seems to me inescapable that in a world practically all of whose trading is done in one or the other of these

²⁰ *International Monetary Plans After Bretton Woods*, Foreign Affairs, October 1944.

currencies, the central fact must be the establishment between them of exchange stability around which other national currencies can be grouped." The present writer is in accord with this view, believing it would be better to postpone action on the International Monetary Fund until settled conditions become a reality. When that hoped-for time arrives, it is not only possible, but probable, that arrangements quite different from those incorporated in the Bretton Woods agreement will be indicated as desirable.

With regard to the immediate post-war possibilities of the International Bank, on the other hand, Dr. Williams is quite enthusiastic. The Bank, in his judgment, could direct exchange to essential points on a selective basis and might thereby prove very helpful. With this viewpoint the writer would also be in accord if something could be done about the international debt situation. As things stand, it seems doubtful if adding to the debt to this country would greatly aid in bringing order out of chaos. That this point has not been overlooked by Dr. Williams is clear from the concluding paragraph of his recent article in which he writes:

"This, in my eyes, makes the solution of England's special difficulties the central postwar problem, more important than the Bank or the Monetary Fund, and certainly essential for the proper functioning of either. But with this problem we have made no headway. The \$12 billion accumulation of sterling war balances in London, though directly an intra-Empire problem in the main, is not dissimilar in nature or in magnitude from the Inter-Allied debt or the Reparations problem that bedevilled international relations during the inter-war period. That England should have to bear it alone is just as questionable from the standpoint of equity as was the Inter-Allied debt. It is the result largely of the fact that we got into the war late and that lend-lease has not had the effect of an equitable sharing of the war costs to the extent that it should have had. Meanwhile England's capacity to carry such a burden has greatly declined, through the loss of her foreign assets and markets. She will need a great expansion of her export trade, probably by 50 per cent beyond prewar, and there will be the special difficulty, as was true in connection with the German reparations transfer

problem, that her manufactured exports are dependent on prior imports of raw materials and the margin between exports and imports is hard to manipulate in the way demanded by her changed balance-of-payments position. It seems essential to know how England's problems are to be dealt with before other financial or monetary plans can be made."

In line with this highly significant statement, it should be clear what our course of action must be if we are to be successful in our post-war monetary or banking plans. A workable adjustment of British (and other) obligations, a gradual monetary stabilization through the "key currencies" approach, and the liberation of trade from undesirable restrictions and discriminations must be our three-fold aim. And the two that have not as yet been tackled are the most important. Assuming these problems to have been met, the International Bank could perform a helpful service and some workable form of international monetary stabilization could be anticipated with confidence.

The greatest obstruction to a key currency arrangement at present is the divergence of the American and British attitudes. Britain is insistent on refusing to don again the gold standard "straight-jacket of 1925-1931." This attitude on the part of Britain is understandable in view of the vast mass of obligations she will find herself encumbered with after the war. If these could be largely eliminated or greatly reduced, the attitude of Britain would probably change. Repeated alterations in pound values in a downward direction might seem better for England than stable exchange rates, but it holds out no hope for real international monetary stabilization. This should be a compelling reason for prompt and liberal action by us and others interested in stability in dealing with Britain's post-war difficulties.

THE COMMERCIAL BANKING OUTLOOK

Wartime changes in assets.—The outstanding change in the position of the commercial banks since 1940 has been a considerable alteration in the composition of bank assets. In June 1940, total loans of all insured commercial banks constituted nearly 43 per cent of earning assets. Five years later this percentage had fallen to 22. United States obligations,

direct and guaranteed, comprised 40 per cent of earning assets in 1940 and slightly over 70 per cent in June 1944. Other securities made up 17 per cent of earning assets in 1940 and slightly over 6 per cent in 1944.

TABLE I

ALL INSURED COMMERCIAL BANKS IN THE UNITED STATES, LOANS AND INVESTMENTS, BY CLASSES, 1940 AND 1944

(In millions of dollars)

<i>Type of earning asset</i>	<i>June 29, 1940</i>	<i>June 30, 1944</i>
Loans		
Commercial, including open market paper...	6,502	7,406
Agricultural	1,184	1,474
For purchasing or carrying securities		
To brokers and dealers.....	464	2,221
To others	742	2,296
Real estate ..	4,281	4,364
All other	3,840	2,968
Total loans	17,011	20,729
Investments		
U. S. Government	15,900	67,085
Direct		
Bills ..	805	4,708
Certificates .....	...	15,466
Notes	2,699	11,834
Bonds	9,026	34,114
Guaranteed	3,370	963
States and political subdivisions.....	3,482	3,393
Other securities	3,436	2,730
Total investments	22,819	73,207
Total loans and investments.....	39,830	93,936

Source: Federal Reserve Bulletin, October 1944, p. 984.

As is clear from the accompanying table, this change in the relative importance of the chief earning assets of insured commercial banks has not resulted from any marked decrease in

loans or other securities but from a tremendous expansion of government security holdings. In fact, although investments other than government obligations decreased by nearly a billion dollars, loans showed an increase of close to four billion dollars over the 1940 figure. The increase of over fifty billion dollars in government securities, however, has dwarfed the importance of loans and other investments by comparison.

TABLE 2

ALL INSURED COMMERCIAL BANKS IN THE UNITED STATES, DEPOSITS,
BY CLASSES, 1940 AND 1944
(In millions of dollars)

<i>Type of Deposit</i>	<i>June 29, 1940</i>	<i>June 30, 1944</i>
Demand deposits		
Interbank	9,636	10,970
U. S. Government.....	756	18,757
States and political subdivisions.....	3,098	4,402
Certified and officers checks, etc.	521	1,550
Individuals, partnerships, corporations.....	28,897	57,351
Total demand deposits.....	42,908	93,030
Demand deposits adjusted.....	30,944	59,197
Time deposits		
Interbank	159	68
U. S. Government, postal savings.....	74	108
States and political subdivisions.....	502	407
Individuals, partnerships, corporations.....	14,775	20,530
Total time deposits.....	16,510	21,113
Total demand and time deposits.....	59,418	114,133

Source: Federal Reserve Bulletin, October 1944, p. 985.

Growth in deposits.—With the large increase in earning assets which occurred in the five years following June 1940, a corresponding increase in deposits would be anticipated. The growth in demand deposits (by classes), demand de-

posits adjusted, and time deposits for the period in question is shown in the accompanying table. It will be observed that deposits of all classes increased by \$54,715,000,000 in the interval, while total loans and investments showed an increase of \$54,106,000,000. The percentage increase in demand deposits was approximately 118 per cent, in time deposits about 28 per cent.

It will be noted that the increase in demand deposits adjusted, about 91 per cent, is substantially less than in total demand deposits. The major reason for this is that inter-bank and U. S. government deposits are not included in this figure. Items in process of collection are also subtracted. In ordinary times the figure for demand deposits adjusted may be considered as a fairly accurate indicator of the amount of check currency. During the period in question, however, a more accurate figure would have to include United States deposits. These have increased by more than \$18,000,000,000 since 1940 and, since they are drawn against by the government in making its payments to business concerns and others, there would seem to be little reason for excluding them. If they were included, the increase in the five years since June 1940 would be approximately 145 per cent.

Reserves.—The very large increase in deposits noted above has, very naturally, been accompanied by a large increase in reserve requirements. Working reserves of insured commercial banks, which consist of reserve balances with the Federal Reserve Banks, cash in vault and balances with other domestic banks, increased from June 1940 to June 1944 by \$779,000,000, or about three and one-half per cent. The question which at once comes to mind is how it has been possible for deposits to have increased more than 100 per cent while the increase in reserves has been, comparatively, so small. Because reserve requirements for insured member banks and insured non-member banks differ, it will be advisable to treat each group separately. The change in the different reserve items for the two groups of banks, as well as for all insured banks is shown in the following table.

TABLE 3

ALL INSURED COMMERCIAL BANKS IN THE UNITED STATES, WORKING
RESERVES, 1940 AND 1944

(In millions of dollars)

<i>Class of bank and call date</i>	<i>Reserve with Fed- eral Re- serve Bank</i>	<i>Cash in Vault</i>	<i>Balances with Domestic Banks *</i>
All banks			
1940—June 29	13,751	984	7,538
1944—June 30	12,813	1,464	8,776
Member banks			
1940—June 29	13,751	789	5,751
1944—June 30	12,813	1,143	5,799
Non-member banks			
1940—June 29	—	194	1,788
1944—June 30	—	322	2,798

* Beginning June 30, 1942 excludes reciprocal bank balances, which on that date aggregated 614 million dollars at all insured commercial banks.

Source: Federal Reserve Bulletin, October, 1944, p. 985.

Member bank reserves.—It will be observed from the table that both legal and working reserves of member banks decreased slightly in the five-year period under consideration, although deposits increased rapidly during the same period. How was such a contradictory movement in deposits and reserves possible? There is a threefold explanation. First, in June 1940, member banks held excess reserves averaging \$6,696,000,000. In June 1944, this figure had decreased to \$1,081,000,000. Second, in three successive steps, the last becoming effective October 3, 1942, the Federal Reserve Board of Governors reduced reserve requirements against demand deposits of central reserve city (New York and Chicago) banks from 26 to 20 per cent. Third, on April 13, 1943, the Federal Reserve Act was amended so that war loan deposits (government deposits) were exempted from reserve

requirements previously imposed on this class of deposits. The combination of these three factors was sufficient to permit the expansion of deposits noted without an increase (in fact a slight decrease) in member bank reserves.

Although reserves with the Federal Reserve Banks decreased nearly a billion dollars, cash in vault increased substantially and balances with other banks slightly. It will be noted from Table 3, footnote *, that reciprocal balances were included in this last figure in 1940, but were excluded in 1944. If reciprocal balances had been excluded in 1940, the increase in this item would have been \$600 or \$700 million greater than indicated in the table. Since this is the case, working reserves of member banks actually increased slightly in the five years under consideration.

Non-member bank reserves.—Since non-member insured banks do not maintain balances with the Federal Reserve Banks, their working reserves consist of cash in vault and balances with other banks. As will be seen from the table, both of these items increased substantially for this group of banks. These banks were, of course, not benefitted by the central reserve city reductions in member bank requirements, nor is it probable that their excess reserves compared with those of member banks in 1940, although no data on this are available. It would seem reasonable to believe that these two factors explain the relatively greater increase in non-member reserves than in reserves of member banks.

Money in circulation.—Although money in circulation does not appear as an item on consolidated bank statements, movements in this series have important effects on the commercial banks. It accordingly seems desirable to discuss briefly the movement of this item during the war period and its relation to the commercial banking situation.

Money in circulation, even prior to the war, was showing a steady increase. At the end of June 1933, the reported figure was \$5,434,000,000. By the close of June 1940, it had risen to \$7,848,000,000. Since the latter date, the increase has been tremendous, the figure for June 30, 1944 standing at \$22,504,000,000. Without attempting here to account for this enormous increase in hand-to-hand money

outside the Reserve Banks and Treasury²¹ its effect on the commercial banking situation should be noted.

It may be stated as a general proposition that an increase in money in circulation results in a corresponding drain on commercial bank reserves. As customers demand more hand-to-hand money, cash in vault is first depleted. This item must then be replenished by drawing on balances in other banks (in the case of non-members) or by drawing, in hand-to-hand money, on balances in the Reserve Banks (in the case of member banks).

It has been shown in earlier paragraphs how it was possible for the commercial banks to expand their earning assets and deposits by more than fifty billion dollars without any substantial increase in working reserves. If, however, the 1940 reserves had been depleted by approximately fourteen billion dollars (the increase in money in circulation), remaining reserves would have been entirely inadequate to support the 1944 level of deposits. It would seem, therefore, that the banks must have relied on accommodation from the Reserve Banks to meet the increased demands for hand-to-hand money. To the question of Reserve Bank accommodation we must accordingly turn our attention.

Reserve Bank aid.—The Federal Reserve Banks can furnish funds for member bank use either by discounting paper for member banks or by the purchase of bankers' acceptances or government securities in the open market. During World War I, the Reserve Banks assisted member banks largely through the discount method. Between June 1917 and December 1918, discounts for member banks increased by approximately \$1.5 billion while purchases of bills and government securities together increased only about \$0.3 billion.

In contrast, since June 1940 (to June 1944), discounts have increased only from \$2 million to \$13 million. No bankers' acceptances have been purchased by the Reserve Banks during the period, but holdings of government securities have increased some \$12.5 billions. Purchase of this vast amount of "governments" by the Reserve Banks has, in the

²¹ For an analysis of the forces causing this increase see, G. L. Bach, *Currency in Circulation*, Federal Reserve Bulletin, April 1944, pp. 318-328.

first instance, correspondingly increased the reserve balances of member banks. These additional reserves have been largely drawn against, however, to obtain hand-to-hand money to meet the ever-increasing demand of the public for this type of medium of exchange.

A considerable share of Reserve Bank purchases of government obligations in the last three years of the period (1940-1944) has been in the form of Treasury bills. On April 30, 1942, the Reserve Banks instituted a buying rate of $\frac{3}{8}$ of 1 per cent on all Treasury bills. Beginning August 3 of the same year, such bills were bought subject to repurchase by the seller before maturity at the same rate of discount and since May 15, 1943 all purchases of bills have been made subject to repurchase option on the part of the selling banks. On September 27, 1944, slightly over \$10 billion of the \$16.5 billion of "government" held by the Reserve Banks were in the form of Treasury bills.

Comparison with World War I.—During the first World War, the banks assisted the Treasury to some extent by the direct purchase of government obligations, but to a greater extent by making loans to individuals for the purchase of Liberty bonds. As the banks became loaned up, they replenished their funds by rediscounting this paper at the Federal Reserve Banks.

In World War II, the Treasury has sold as many bonds as possible to individual and institutional investors for cash and has relied on the banks to furnish the excess needed (above bond sales to investors and taxes) by direct purchase. The fact that direct purchases by the banks in this war have greatly exceeded both direct purchases and Liberty bond loans in World War I is a result of the enormously increased expenditures in the present conflict. Percentagewise, the proportion of funds furnished by the banks has been less than in World War I. Even so, it has been sufficient to make government securities the dominant figure in commercial bank loans and investments.

Bank earnings.—The ratio of net profits (after charge-offs or recoveries and taxes) to total capital accounts of member banks in 1940 amounted to 6.2 per cent; in 1943 the corresponding figure was 8.3 per cent. This substantial in-

crease in net profits in the face of a declining yield on securities (2.4 per cent to 1.8 per cent) is explained by the tremendous increase in earning assets, chiefly government securities, without a corresponding change in the total of capital accounts. Member bank loans and investments increased by approximately 95 per cent between June 1940 and June 1943, while capital accounts increased only 15.5 per cent. Thus, with greatly expanded bank credit, combined with a comparatively small expansion of capital accounts, earnings as a per cent of capital have increased in the face of a declining yield.

Although earnings figures are not yet available for 1944, the same trend continues. Between June 1943 and June 1944, loans and investments of member banks increased over 24 per cent, while the increase in capital accounts has been but 3.4 per cent. Some increase in income from service charges and some decrease in investment expense in selecting government as opposed to other securities may be mentioned as minor factors in the increased profits of the banks. Recoveries and charge-offs have been of comparatively small importance throughout the five-year period.²²

The post-war commercial banking outlook.—While post-war predictions along any line are hazardous, this brief survey may be concluded by attempting to point out the most likely effects of the post-war situation on the commercial banks.

In the first place, no substantial decrease in deposits is to be anticipated. In fact, deposits are likely to increase if anything. Government bond financing will almost certainly continue for a substantial period and sales to individual investors will probably be more difficult than during the war. This would indicate that the banks would have to absorb an increasing proportion of government issues, thus increasing deposits. Moreover, to the extent that individuals cash previously purchased war bonds to purchase civilian goods, the Treasury will have to refund such bonds, most probably with issues to be sold to the banks.

²² Data in the preceding paragraphs have all been obtained from *Banking and Monetary Statistics* and the *Federal Reserve Bulletin*, both publications of the Board of Governors of the Federal Reserve System.

The possibility of an increase in business loans is problematical. A great many business concerns have built up large amounts of working capital during the war period, but the probabilities are that, with reconversion costs to be met, even the substantial amounts of liquid assets which have been accumulated will not suffice and some resort to the banks may accordingly develop. This type of demand for bank credit, however, is so tied up with the duration of the war, the speed of reconversion and the degree of business activity in the post-war period as to defy a forecast with any degree of accuracy.

Assuming a continued increase in bank purchases of government securities for some time to come and a possible increase in business loans, deposits will continue to grow in the system at large. Under such circumstances the question of the adequacy of reserves to support these deposits will arise.

As the situation appears at present (late fall of 1944), reserve funds can be made available under existing law in sufficient amount to care for any probable increase in deposits. The Board of Governors of the Federal Reserve System can reduce reserve requirements of member banks to 13, 10, and 7 per cent of demand deposits and 3 per cent of time deposits for central reserve city, reserve city and country banks respectively. Moreover, it seems probable that some portion of the enormous reported amount of "money in circulation" will return to the banks, adding accordingly to their reserve funds. The government also still has the power to issue \$3,000,000,000 in United States notes and to issue silver certificates against the silver seigniorage acquired through the silver purchase program. The \$1,800,000,000 in gold held by the Treasury in the Stabilization Fund might also be added to the reserves of the Federal Reserve Banks.

On the other side of the picture, should the Bretton Woods proposals be adopted, the Treasury would have to make substantial contributions to the Fund and Bank. There is, as well, the possibility that several billion dollars of gold may be exported after the close of the war. It is perhaps justifiable to assume that a reduction of money in circulation will suffice to offset these drains on reserve funds. If so, the other factors mentioned in the preceding paragraph would be

ample to permit an expansion of some \$200,000,000,000 in deposits, even without the issuance of United States notes and the monetizing of the silver seigniorage.²³

It should be clear, then, that a scarcity of reserves is not likely to hamper the commercial banks. As a matter of fact, the danger lies in another direction. Even with a high level of production and distribution, an increase of deposits to the neighborhood of the figure indicated could scarcely occur without either strict price control or a severe inflation of prices.

²³ This figure is obtained from a calculation published in *The Guaranty Survey*, September 26, 1944, pp. 1-2.

